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AMERICAN SURVIVAL GUIDE

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25 WAYS TO ENDURE

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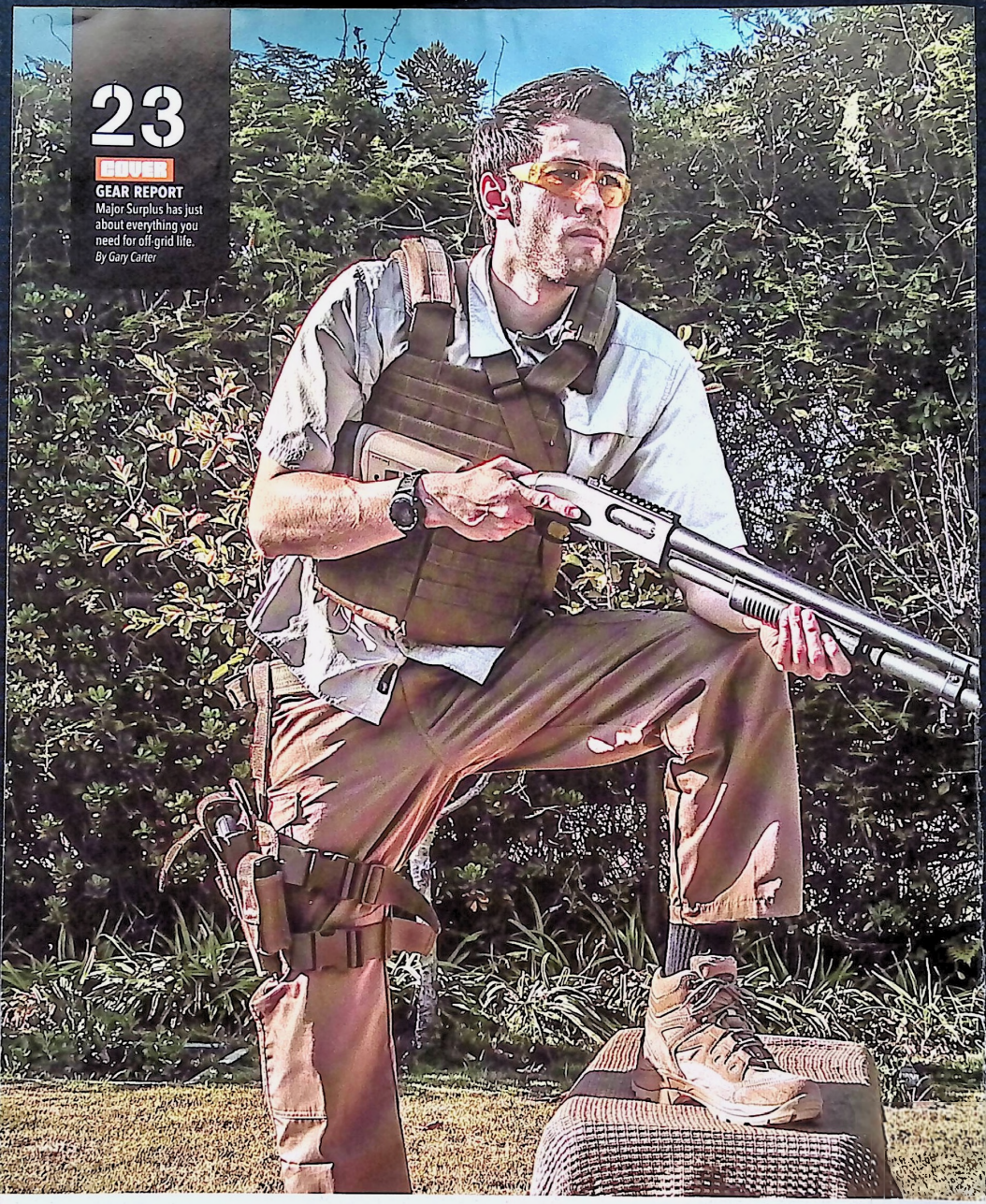

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COVER

GEAR REPORT

Major Surplus has just about everything you need for off-grid life.

By Gary Carter

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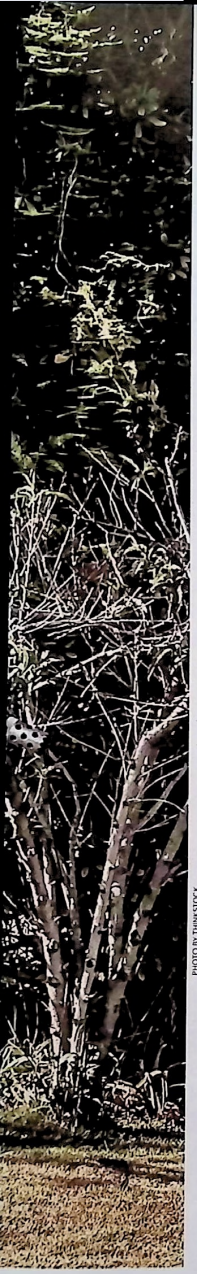

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BY BARRI SEGAL

PHOTO BY THINKSTOCK

How OTG Are You?

SURVIVALISM IS ABOUT doing without some or all of society's lifelines: mass-produced food, petroleum power, industrial utilities, the financial system …

It's the establishment, the status quo, and if you're reading this then you probably believe that any or all of these grids are inadequate at best and you'd be better off.

WHO IS OFF GRID?

The current worldwide estimate is 1.7 billion people. It's safe to assume they are not there by choice, which actually makes them survivors.

In 2006, USA Today reported estimates of 180,000 OTG American survivalists with the number supposedly growing by about one-third every year. Accurate estimates are hard to come by, and I hope that everyone living that good life manages to avoid stupid surveys in the first place.

THE POST-CONSUMER

The trendy new term for newbie is "post-consumer," one who is in the process of reducing dependence on "stuff" and being satisfied with enough. This might lead to a full-blown minimalist lifestyle or something less; nothing says you can't grow your own food, reduce your carbon footprint and still be comfortable, too.

THE PREPPER

The prepper/survivalist represents the next level of OTG commitment. Survivalism is the active preparation for any and all emergencies. Medical training, self-defense, shelter construction and stockpiling supplies are among the skills required to survive.

THE MINIMALIST

The minimalist is a prepper who has simplified his or her life down to, in many cases, 100 items or fewer. It's not everyone's cup of tea, but you've got to respect the dedication.

THE MULTINATIONAL CORPORATION

The benefits of being OTG aren't lost on big corporations. According to the Wall Street Journal, corporations such as Walmart, Safeway, Google, Bank of America, Coca-Cola and others have invested millions in creating their own power grids. It's good to see corporations like Kroeger investing in bio-waste conversion technology, powering forklifts by converting the food it doesn't sell.

The downside is that when the big boys go off the grid, the problems for the general public will escalate.

The WSJ notes that utility execs are concerned: "The growing number of companies that are at least partially energy self-sufficient is sending a shudder through the utility industry, threatening its revenues and growth prospects." That report came out last November. This past January, as if on cue, the electricity index hit its largest month-to-month increase in four years, according to the U.S. Bureau of Labor Statistics, while the Department of Energy reports that production has declined since 2007.

I'm not saying this is a good thing or a bad thing, but it makes everything we do even more urgent.

It's already tomorrow. Be ready today.

SOURCES: www.offthegridnews.com, www.cnbnews.com, www.madeinghana.com

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1. KURGO

PRODUCT: FIRST AID KIT
WEBSITE: www.kurgo.com
MSRP: $30

Specifications:
- 50-piece kit
- Bottle opener/hook closure
- Hook portion closes the kit and allows it to be hung when open
- Exterior zipper pocket
- Three interior mesh compartments
- Oxford 600D fabric with twill tape binding for durability

Defining Features: For many, pets are another member of the family. While we all know the importance of a first aid for human beings, it's important not to forget about our furry friends. Every pet owner should have a first aid kit for his or her pet. This first aid kit from Kurgo contains all the essentials to help heal everything from a scuffed paw to a twisted ankle. Not an expert in pet medicine? No problem. The kit includes Kurgo's extensive guide to administering aid on pets to ensure proper care.

Manufacturer's Comment: *"Everyone should have a basic first aid kit when traveling and we feel that pets are no different. As major pet travel advocates, we know accidents can happen anytime and we want our customers and their pets to be prepared."* –GORDIE SPATER, PRESIDENT

2. GERBER

PRODUCT: Gerber MP1 Multi-Tool
WEBSITE: www.gerbergear.com
MSRP: $115

Specifications:
- Overall length: 6.75 inches
- Closed length: 4.20 inches
- Weight: 0.88 ounce
- Jaws: 6150 carbon steel
- Blades: 420HC steel
- Handle: G-10 textured composite

Defining Features: Gerber has once again outdone itself with its latest tool offering. The MP1 Multi-Tool is a quality multi-tool anyone who is off the grid should have. It includes large, full fine-edge and serrated blades, diagonal cutters and a wire stripper on the jaws, innovative utility blade/scraper, magnetic bit driver and a combo opener/pry bar. There's even a sheath included at no extra cost.

Manufacturer's Comment: *"The Gerber MP1 Multi-Tool is an item every outdoorsperson should have. It includes 12 components, including forged jaws, G-10 handles and bottle opener."* –MIKE MAY, BACKBONE MEDIA

3. POWER PRACTICAL

PRODUCT: THE POWERPOT V
WEBSITE: www.powerpractical.com
MSRP: $149

Specifications:
- Lightweight pot emits 5 watts of on-demand power
- Equipped with standard USB (5V) port and 3-foot, flame-resistant cable
- Pot is compatible with a plethora of devices including smartphones, tablets, GPS units, iPods/MP3 and lithium ion batteries
- Solid-state voltage regulator provides enough power to also run speakers, lights, fans and other low-power USB appliances

Defining Features: You may recognize the PowerPot V –it was recently featured on ABC's hit TV series "Shark Tank," where Mark Cuban invested in the off-grid startup. The PowerPot V is a must-have for those planning to travel off grid. This unique device combines a lightweight cooking pot and a portable USB charger. Recharge your battery on your mobile device while cooking a tasty stovetop meal at the same time!

Reviewer Comment: *"The PowerPot is a unique, rugged, reliable, useful and effective tool for backpacking, car camping, travel trailers, sailing voyages and bush-pilot adventuring. This amazing camp gadget would definitely be a great addition to anyone's emergency survival pack."* –JAMES HANNIBAL, EXAMINER.COM

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6

4. YETI COOLERS

PRODUCT: YETI TUNDRA 45
WEBSITE: www.yeticoolers.com
MSRP: $349.95

Specifications:
- Colors: white, ice blue, desert tan
- Permafrost insulation
- No-sweat design
- Double-haul handles
- Holds up to 26 beverage cans and 35 pounds of ice
- Dimensions: 25 ½ inches (length), 15 3/8 inches (height), 9 ½ inches (depth)

Defining Features: The YETI Tundra 45 is Yeti Coolers' best all-purpose cooler and the company's top choice for a good reason. This heavy-duty cooler has a versatile 26-can capacity and is easily portable. And, of course, this cooler is infused with that legendary YETI toughness–made from roto-molded polyethylene. It's UV resistant, heavily insulated and nearly indestructible.

Manufacturer's Comment: "YETI Coolers are an extreme example of how durable and insulated a cooler can be. The Tundra series is built to hold up to serious abuse and last much longer than an average cooler."
–CARL JOHNSON, BACKBONE MEDIA

5. BIG AGNES

PRODUCT: Hog Park 20 SLEEPING BAG
WEBSITE: www.bigagnes.com
MSRP: $169.95

Specifications:
- Pad Size: 25x78 inches
- Color: Coal/rust
- Fill Type: Thermolite Quallofil
- Fill Weight: 2 pounds, 8 ounces
- Bag Weight: 5 pounds, 11 ounces
- Stuff Sack Size: XL (10x21 inches)
- Compressed Bag Size: 10x12 inches

Defining Features: Congratulations! You've made the wise decision to join thousands of Americans already off the grid. Hog Park sleeping bags will help keep you as warm as toast. These sleeping bags are cut wide and tall to fit people of all shapes and sizes. They're perfect for outdoorsy people with more bulk or those who are looking for some extra room to move around.

Manufacturer's Comment: *"Our sleeping bags are ideal for hunting camps, base camping or budget-minded road tripping. Slip one of our 25-inch wide pads into these Big Agnes System bags, which utilize our full pad sleeve design."* –CARL JOHNSON, BACKBONE MEDIA

6. MR. BEAMS

PRODUCT: ReadyBright Power Outage Lighting Starter Kit
WEBSITE: www.mrbeams.com
MSRP: $59.99

Specifications:
- Automatically detects a power failure and provides up to 40 hours of bright light
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Defining Features: The ReadyBright Power Outage Lighting System Starter Kit contains a Wireless Power Outage LED Flashlight and Remote, one Wireless Power Outage Ceiling Light and one Wireless Power Outage Stair Light. When the power goes out, the remote will detect the outage and signal the emergency lights to turn on automatically.

Manufacturer's Comment: *"This convenient lighting system can be installed in minutes. Simply plug the Power Outage LED Flashlight & Remote into any centrally located outlet. Determine locations within 70 feet of the remote to install the ceiling and stair lights so they are within range of the remote's wireless signal."* –LAURA BAUMGARTNER, ASYLUM PR

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Tipping Point

ALTHOUGH LIVING OFF the grid represents just a minority of people on the planet, this could change very soon, according to a recent analysis by investment bank Morgan Stanley.

The report, which was released in March, indicates that the dropping costs of solar modules and battery storage could be just the "tipping point" to nudge consumers toward an off-grid lifestyle. This could create a huge disparity in earnings for utility companies, which rely on providing energy to consumers to stay afloat.

In particular, the tipping point would be especially appealing in "sun-rich, rate-high" states, the Morgan Stanley analysis determined. This means that if you are already using a completely solar approach to your needs, you're on the leading edge—and if you're not, prepare to convert eventually.

Government vs. Off-Grid Lifestyle

PEOPLE WHO ADOPT an off-the-grid lifestyle are helping the government save money by not requiring the use of public utilities, right? Not so fast. The reality is that many governments stay in business by providing you with utilities that have upcharges bundled into them, and your off-grid lifestyle threatens their existence.

A Florida woman learned that the hard way in March. Despite owning her home free and clear and being up to date on her property taxes, she was asked to vacate her property after appearing on television to discuss her off-grid lifestyle. While in the media, the woman revealed that she didn't have electricity and collects all of her water in rain barrels. The Cape Coral government determined that her home was "unsafe/unfit for human habitation," even though they never inspected the house.

The woman is continuing her battle with the town to allow her to continue living her off-grid lifestyle, WND TV reported.

PHOTO BY THINKSTOCK

PHOTO BY THINKSTOCK

Stay Cool

THE HEAT IS here, but you don't have to fall victim to heatstroke or dehydration even if you're off grid and don't have access to air conditioning. Consider these tips from the Centers for Disease Control to ensure that you stay healthy as the temperature rises:

- Drink plenty of fluids even if you don't feel thirsty.
- Wear loose, lightweight, light-colored clothing and sunscreen.
- Schedule outdoor activities carefully.
- Pace yourself.
- Take cool showers or baths to cool down.
- Stay in the shade as much as possible.

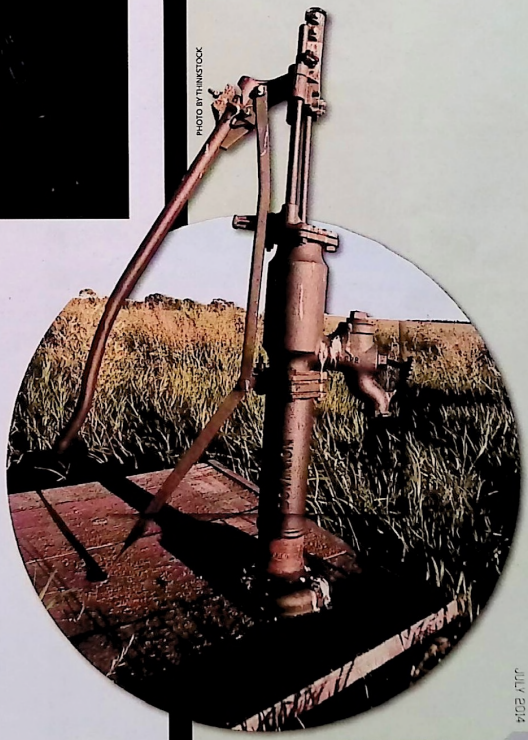
SOURCE: www.cdc.gov

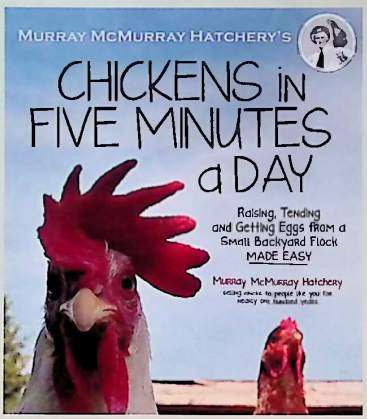
Free Water Well Training

IF YOUR WATER supply comes directly from a private well but you aren't sure how to maintain it, the Private Well Class has a free training class for you–and the best part is that you don't even have to leave your house to participate.

The Private Well Class is a grant-funded organization that educates homeowners about their private wells via online training classes. You'll learn how groundwater gets into your well, how to prevent contamination, what to do about well maintenance, how to test your water to ensure that it's safe and what to do if your equipment fails. > If you'd like to register for the class, visit www.privatewellclass.org.

PHOTO BY THINKSTOCK





BOOK REVIEW: "Chickens in Five Minutes A Day"

IF YOU'RE INTERESTED in raising your own chickens so you have farm-fresh eggs every day but you don't have much time to spare, you may not realize that chicken farming represents a very small time commitment. In fact, just five minutes a day is all it takes before you are on your way to chicken-raising bliss.

That's the word from the book "Chickens in Five Minutes A Day" by the Murray McMurray Hatchery. The book is an excellent tutorial for the budding chicken farmer, walking you through exactly what type of space you'll need to raise chickens and providing such information as which type of hens are most advantageous to you.

You'll also find tips on the type of coop to construct, the optimal temperature for quality eggs and what to feed your chickens. Our favorite part of the book is the description of the five-minute daily routine (page 121), which tells you exactly what you need to ensure that your chicken maintenance is optimal so you continue to have healthy chickens and a robust egg supply.

Off-Grid App

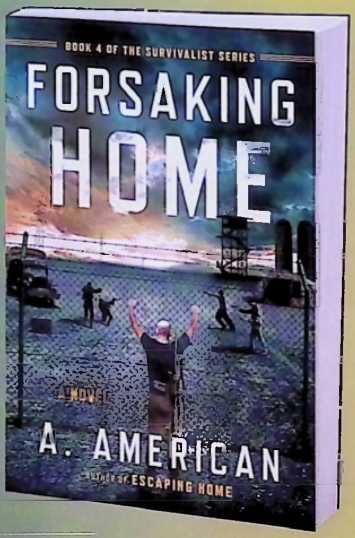
YOU MAY NOT have access to the grid, but you probably have a phone or tablet for making calls. If your phone allows you to download apps, consider accessing the SAS Survival Guide by Trellisys, which is available for Apple, Android and Windows Phone.

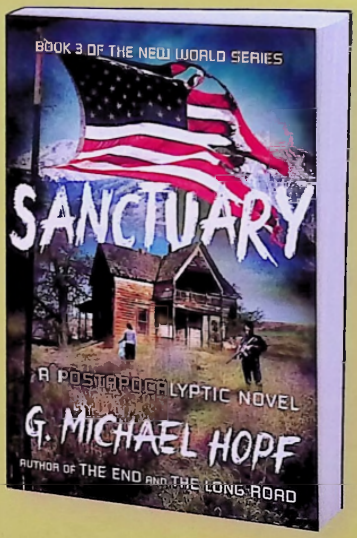
The "SAS Survival Guide" by John "Lofty" Wiseman has long been perceived as the gold standard when it comes to staying safe in any situation, and now you can lighten your load by getting all of the guide's information in one simple app.

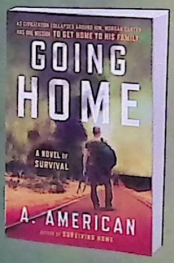
Based on the teachings of the Special Air Service (SAS), part of the UK's Special Forces, this guide will show you how to survive on land, at sea, in the desert or in the arctic. With how-to videos, several handy checklists, information on how to signal using Morse code and a compass that can guide you using the sun as a benchmark, you'll stay alive and find your way home with this essential app.

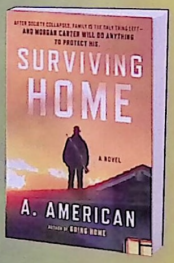
WHAT WOULD YOU DO TO SURVIVE?

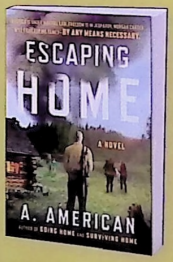
TWO NEW SURVIVALIST CLASSICS FROM A. AMERICAN AND G. MICHAEL HOPF

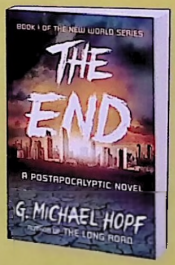












PLUME

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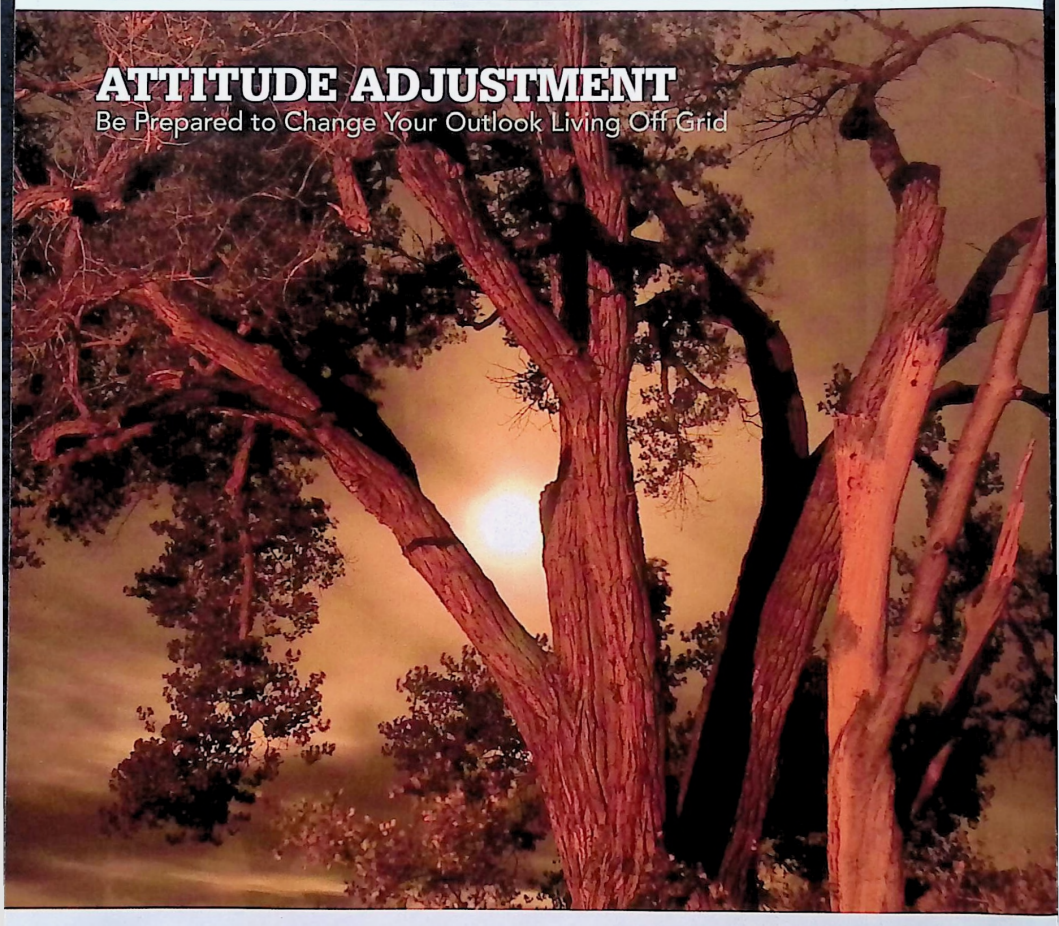
GENERAL

IN THIS SECTION NEWBIE TIPS + OFF-GRID GEAR ESSENTIALS + MENTAL PREP + QUIZ



ATTITUDE ADJUSTMENT

Be Prepared to Change Your Outlook Living Off Grid

YOU'VE CAMPED FOR A WEEKEND in a tent and that worked out well, so you probably know what it's like to live permanently off the grid, right? No way. Cutting yourself off completely from the conveniences you've lived with your entire life is going to be fulfilling in almost every way, but it certainly is going to take a lot of adjustment for your entire family.

You aren't alone in your transition, however. We've got the tips that can help you ease into your new off-grid lifestyle comfortably and safely. Turn the pages to learn how to cope off the grid, both physically and emotionally. In addition, we've got information on how to preserve food so you stay healthy throughout the year, and we'll share details on a family that has made an off-grid dream an amazing reality.

PHOTO BY THINKSTOCK

PHOTO BY THINKSTOCK

STAY ALIVE WITH 25

FOLLOW THESE TIPS TO COPE WHEN THE GRID GOES DOWN

By LARRY SCHWARTZ

WHEN WE DECIDE TO LEAVE THE GRID, it is typically a conscious decision and we have time to prepare for it.

Unfortunately, as the extreme weather throughout the past couple of years has shown, sometimes the grid decides to leave us and we don't have time to prepare.

GENERAL

- Practice your skills in the great outdoors.
- Get familiar with your gear; use it to practice your skills and know it like the back of your hand.
- Stockpile more than you need of key items like batteries, fuel and warm items, such as blankets and sleeping bags, to use as barter items if the grid is down for an extended period of time.
- Develop plans for short- (one to three days), medium- (three to 14 days) and long-term (14 days to several weeks or months) outages.

"UNFORTUNATELY, AS THE EXTREME WEATHER THROUGHOUT THE PAST COUPLE OF YEARS HAS SHOWN, SOMETIMES THE GRID DECIDES TO LEAVE US ..."

ELECTRIC

- Buy a generator that will meet your needs.
- Stockpile batteries in a variety of sizes.
- Buy and practice with a thermoelectric generator (TEG) device, such as the BioLite Campstove, which can convert heat into electricity to charge small electronic devices like radios and smartphones.
- Install solar panels now as an adjunct to your use of utility power so that you have it in place and integrated into your home before the grid goes down.

PHOTOS BY THINKSTOCK

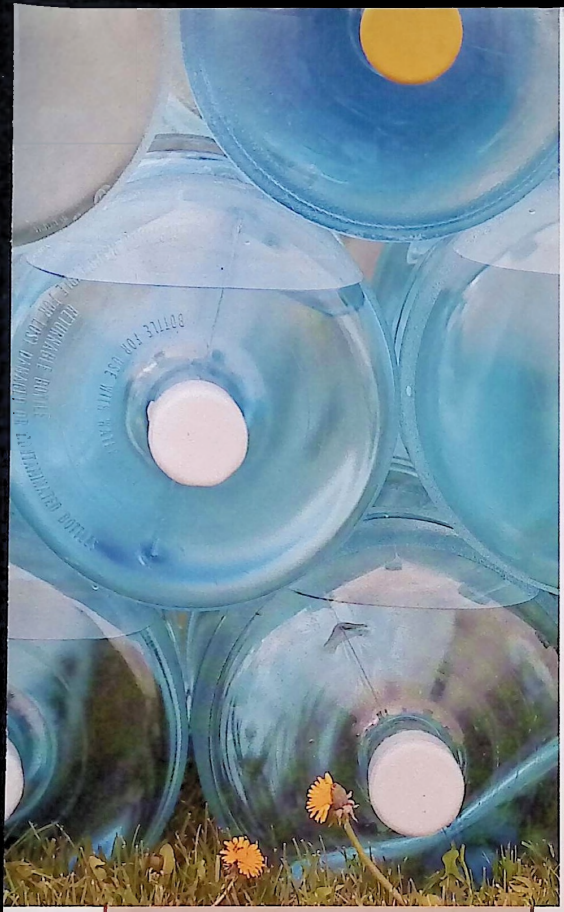


PHOTO BY THINKSTOCK

WATER

• Stockpile two week's worth of water (two gallons per person, per day) in 1-gallon, 2.5-gallon or 5-gallon containers so you have it on hand before a crisis happens.

• Buy a water reservoir for each bathtub and sink to be filled as soon as you find out the water supply is down.

• Buy two pump- or gravity-powered water filters (one primary and one backup) with attachments to your large water containers to use with local water sources like streams, lakes or ponds.

STOCKPILE FOR BARTERING

The following items have proven to be the things most often bartered for in a shortage. Think about what feeds people's vices and then what they need to survive:

- Alcohol and cigarettes
- Toilet paper and other paper products
- Feminine hygiene products
- Duct tape
- Hand-powered can openers
- First aid materials and medicines
- Batteries
- Water and water purification equipment
- Fuel canisters
- Food with a long shelf life, such as rice and pasta

SKILLS FOR BARTERING

The following skills can be offered as bartering "currency" during extended emergencies:

- Basic medical skills
- Electricial
- Carpentry
- Small motor repairs
- Gunsmithing

THERMOELECTRIC (TEG) DEVICES

TEG devices are great multi-taskers as they allow you to turn the heat you use to cook or warm yourself into electricity that you can use to charge your small electronics or a battery charger.

PHOTO COURTESY OF BIOLITE

SEWAGE

• Invest in waterless toilets like those sold in camping, RV or boating stores. Note: Pay special attention to cleanliness; not doing so is the quickest path to disease if the grid goes down.

• Plan and learn to recycle water for different purposes.

PHOTOS BY THINKSTOCK

COMMUNICATIONS

• Research alternative methods to communicate (both getting and sending information) with friends, family and the government before the grid goes down.

• Get a battery-powered radio.

• Buy, charge and rotate through extra batteries for your smartphones and other electronics.

• Invest in a set of two-way handheld radios with different frequencies for family communication in case mobile phones stop working.

PHOTO BY THINKSTOCK

FOOD

• Cook at least one meal each month (or week) using your "grid goes down" equipment to make sure it all works and that you use it to prepare what you and your family like.

• Stockpile a month's worth of food that your family is used to eating. Nothing is worse than the kids not wanting to eat what you have on hand or developing stomach problems from eating "survival rations" for a week.

• If your locale allows it, plant a vegetable garden in your backyard (or a container garden in your home) and couple it with a few laying hens for their eggs.

"INSTALL SOLAR PANELS NOW AS AN ADJUNCT TO YOUR USE OF UTILITY POWER . . ."

PHOTOS BY THINKSTOCK

HEAT

- Stockpile your chosen source of heat (wood, propane gas in tanks, isobutane camp stove fuel, etc.).
- Buy and practice with stoves and heaters that work on your chosen type of fuel.
- Buy a stove that runs on a variety of different fuels, or buy a variety of stoves that run on different fuels so that you always have something that works with the fuel that is available.
- Install a wood-burning stove in a room where everyone can congregate during the day and sleep at night if you lose power or heat for an extended period of time.
- Get used to living in your basement. Once you drop down 6 feet below ground level, the temperature stays at around 60 degrees, regardless if it is cold or hot outside.

GO OLD SCHOOL WITH A BICYCLE

Turns out that the best new thing in transport is the best old thing: Get yourself a new or used bicycle, preferably a touring or mountain bike, and equip it with some panniers or saddlebags to give yourself a handy way to go places and carry things to and fro.

GET OUTSIDE THE BOX!

Some of the ideas listed you have probably already done or have integrated into your daily activities or emergency plans. If you haven't put them into common practice, give them some strong consideration. Do some outside-of-the-box thinking about what you depend on each day and figure out what you can do with your existing resources to improve your preparedness.

Larry Schwartz is an experienced outdoorsman and hunter as well as a former Boy Scout who enjoys passing on his knowledge of the outdoors and how to prepare through his writing and workshops.

GEAR REPORT

NEED OFF-GRID SUPPLIES? CHECK OUT MAJOR SURPLUS!

By BARRI SEGAL • Photos Courtesy of MAJOR SURPLUS

IF YOU DECIDE TO LIVE OFF GRID, you'll be in for a lot of hard work and some surprises.

To ensure you're fully prepared for the lifestyle, getting the right gear is key.

To help you prepare, Major Surplus carries a complete line of products that enhance your ability to survive, which can come in mighty handy in an off-grid scenario.

With a wide variety of gear ranging from pants and shirts to footwear, bags and packs, Major Surplus carries just about everything you can think of to make off-grid life a little easier. Turn the page to check out the gear our cover models are sportin' and decide what it is you need for your own undertaking.

CONTACT INFO

To see all of Major Surplus' gear, check out www.majorsurplus.com, or for more information, call (800) 441-8855.

Voodoo Cap

Adjustable, one size fits all. This soft, comfortable, poplin hat with an embroidered Voodoo Tactical logo and U.S. flag is adjustable, making it one size fits all. Different colors are available.

MSRP: $6.95/$7.95 (multicam)

X-Lite Gen II Plate Carrier

This versatile plate carrier features many options, including a removable MOLLE cummerbund that you can take off to use the attached adjustable side straps for fit adjustment and/or the adjustable loops for your tactical or duty belt. It holds front and rear full-sized plates and/or soft armor in separate smaller, inside hook-'n'-loop panels that assist in preventing soft armor movement. The heavily padded, mesh-covered adjustable shoulder straps have com wire channels, and the carrier's interior has mesh padded areas for reduced weight and all-day comfort. One size fits all.

MSRP: $99.95/$109.95 (multicam)

Tactical Drop Leg Holster

Used by Special Operations personnel throughout the world, this thigh rig will hold any handgun securely, from a .380 to a large .45 auto. It offers three ways to secure your handgun: hook-'n'-loop strap, strap with a snap and strap with an "E" buckle. A magazine holder is mounted to the holster and all straps are adjustable to custom fit various-sized handguns. The holster itself is completely adjustable to fit any size body, and it's field tested to withstand a combat jump or long swim. The platform measures 7 ½ inches long by 9 inches high. Available in right- and left-hand models and different colors.

MSRP: $29.95

Tru-Spec 24-7 Tactical Combat Pant

These 65/35 poly/cotton rip-stop tactical pants feature a unique, casual pocket design: two front-slant pockets, two open accessory pockets and six expandable pockets with hook-'n'-loop flap closures. The pants are made with a comfort waistband and double reinforced knee with built-in kneepad pockets. Available in even waist sizes 30 to 44 with a 32-inch inseam and 34 to 44 with a 34-inch inseam. Colors include black, olive drab and khaki.

MSRP: $39.95

Voodoo Sniper Veil

This lightweight sniper veil is made from washable cotton material and measures 48 by 36 inches. It comes in seven colors: Black, Olive Drab, Coyote, Army Digital, Woodland Camo, Multicam and Desert Tan.

MSRP: $16.95

Voodoo Crossfire Gloves

A pair of all-purpose tactical gloves constructed of soft, pliable Amara synthetic leather for the palm and fingers with a four-way, quick-drying spandex/nylon back that provides superior grip during wet ops. These gloves feature a padded protection palm, over-wrapped finger tips, reinforced thumb and elastic wrist with hook-'n'-loop closure tab. Available in sizes M to 2XL.

MSRP: $19.95

Mil-Spec Nylon Rope

50-foot Nylon 3/8-inch Cord (two pack)

With 50 feet of 3.8-inch (9mm) nylon cord, you get super toughness with a minimum tensile strength of 1,350 pounds. This makes the cord ideal for a number of applications, including tie downs for camping equipment. Sold in a two pack.

MSRP: $9.95

Matrix Pack

The Mini Matrix features an adjustable, padded shoulder harness with attached electronics instrument pouches; multiple side, upper and lower pockets; and reversed coil zippers to keep the sand out. Other features include lots of universal webbing for pouch attachments, hook-'n'-loop ID patch and an enhanced harness-retention system for maximum load carry. The mini is hydration compatible with covered hose exit port, and the main compartment features admin pockets and compartments, a padded pocket for laptop and hydration bladder-pocket. All seams are double-stitched and bar-tacked at all stress points. Measures overall 9 inches long by 13 inches wide by 15 inches high.

MSRP: $149.95/$159.95 (multicam)

Tan Low-Cut Tactical Action Boots

These durable boots are made from flesh-out leather with breathable nylon uppers and padded collar and tongue. They feature slip-resistant dura-grip outsoles, a removable comfort cushion foot bed, a moisture-wicking lining and a speed lace system. They are available in full sizes 6 to 13, in regular or wide widths.

MSRP: $79.95

CONVENIENT FOR STORAGE AND TRANSPORTATION

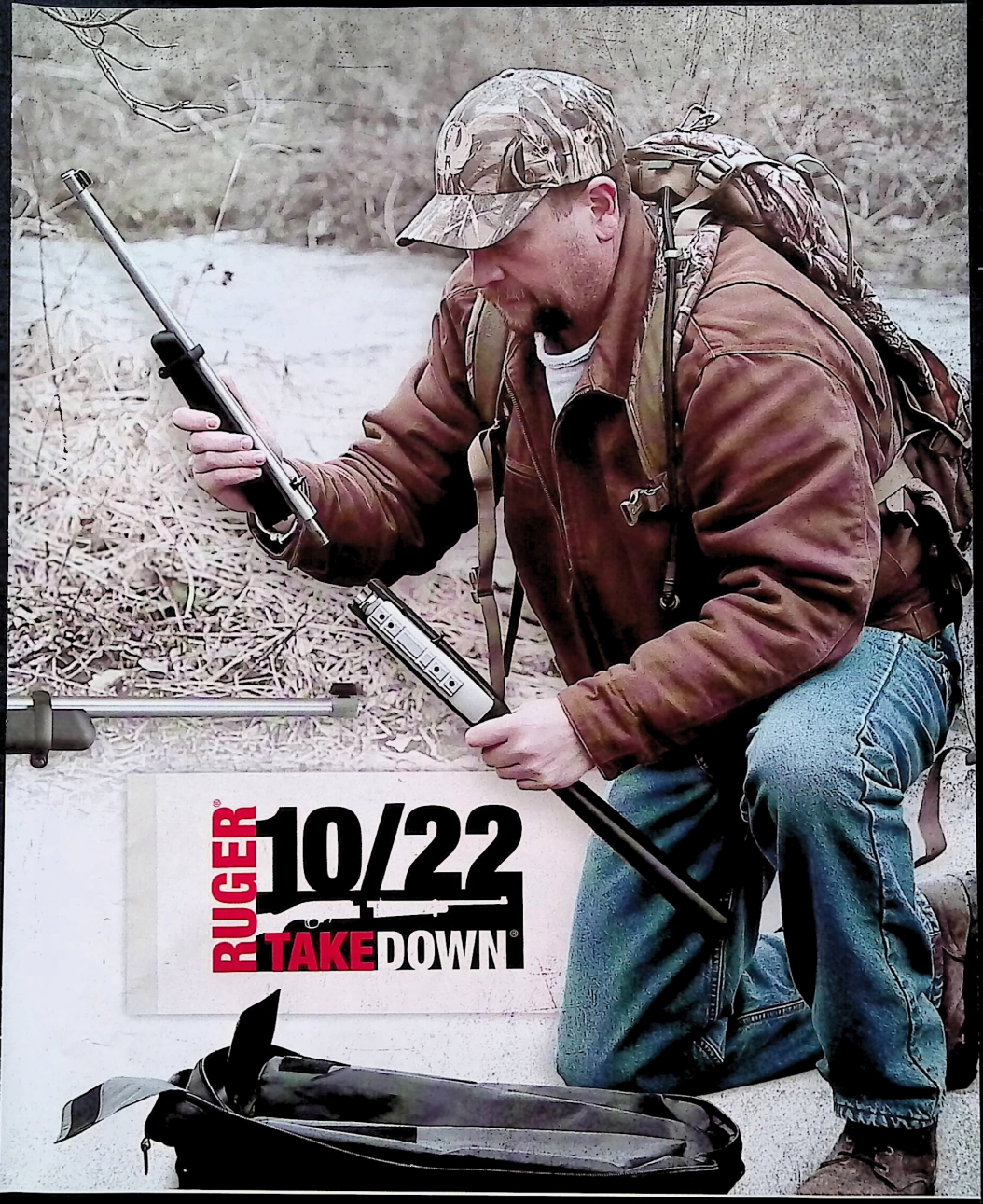
RELIABLE PERFORMANCE FOR WHEN YOU NEED IT MOST

Survival List:

- ☑ Bottled/Container Water
- ☑ Non-Perishable Food or MREs
- ☑ Matches, Lighter or Other Fire-Starting Tool
- ☑ Flashlight with Batteries (or Self-Charging)
- ☑ First-Aid Kit
- ☑ Radio with Batteries
- ☑ Multi-Tool (Including Knife/Can Opener)
- ☑ Sleeping Bag/Blanket
- ☑ RUGER 10/22 TAKEDOWN

The Ruger® 10/22 Takedown® combines all of the features and functionality of the 10/22® rifle, America's favorite rimfire rifle, with the ability to easily separate the barrel/forend and action/buttstock for convenient storage and transportation. The simple reassembly of the barrel and action is secure, ensuring an accurate return to zero for consistent, reliable performance when you need it most. Packed in a rugged, ballistic nylon case (included with rifle), the Ruger® 10/22 Takedown® makes it easy to keep America's favorite rimfire by your side.

RUGER.COM/1022TAKEDOWN



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RUGER

S.O.S.

10 MUST-HAVES TO HELP YOU STAY ALIVE IN AN EMERGENCY

By LARRY SCHWARTZ

HAVING BACKUP SUPPLIES ON HAND when the grid goes down is just plain common sense.

With proper preparation you can wait out pretty much any disaster, short of a flood or fire. The following 10 categories will help you prepare for the worst.

A multi-tool with pliers can be your best friend in an off-grid situation or as an everyday-carry item. If I don't have mine on my belt at the time, it is normally what I reach for around the house, even before going to my toolbox.

"OTHER THAN OXYGEN, WATER IS THE ONE THING YOU CANNOT DO WITHOUT."

PHOTO BY TH NKSTOCK

1 WATER

Other than oxygen, water is the one thing you cannot do without. You need to plan on having it on hand and for getting more of it in the future.

What to have on hand: 2 gallons of water per person per day for at least three to seven days, large water containers to fill when you find the grid has gone down and water filters and purification devices to make water from streams and lakes safe to use. Purification/filtration devices include filters, ultraviolet anti-microbial technology and chemical-purification-based drops or pills.

2 FOOD

This category requires three things: something to eat, something to cook it in and something off which to eat it.

What to have on hand: different types of stoves for the different fuels so you are not dependent on just one kind (propane gas grill, isobutane camp stoves, charcoal grill, backyard firepit), medium-sized pots or pans for heating and cooking and eco-friendly paper plates, cups and plastic cutlery, which can be thrown out so you don't have to waste water cleaning them.

You can boil water to purify it, simmer soups, cook fish and meat, grill vegetables and even bake bread or pizza on a backyard grill. As these grills can use charcoal, briquettes or even scrap wood, you will not be as dependent upon finding fuel as you would be with a gas-fueled stove.

3 SHELTER

Shelter can normally be handled by making the most of what we have on hand. Your focus should be on ways to keep yourself warm and dry.

What to have on hand: Sleeping bags or blankets, ground pads or cushions from the couch for sleeping. Your house will provide shelter, but a tarp or backpacking tent can work if the house is damaged.

4 FIRE

Fire provides heat, light and a way to cook, if necessary. For this, you should follow the "Rule of Threes" (see sidebar, left) when planning what you need.

What to have on hand: butane lighters, waterproof and windproof matches, ferro rods and strikers, commercial fire starters or homemade ones (such as those made from cotton balls and petroleum jelly or rolled-up cardboard soaked in melted paraffin).

"YOU WILL NEED TO BE ABLE TO COMMUNICATE WITH RESCUERS, WITH FAMILY MEMBERS AND TO HEAR ANNOUNCEMENTS FROM THE GOVERNMENT."

5 COMMUNICATIONS

You will need to be able to communicate with rescuers, with family members and to hear announcements from the government.

What to have on hand: Signal flares, signal or handheld mirrors, cell phones with extra batteries or a charger for use in your car, hand-cranked or battery-powered radio for emergency announcements and weather reports and personal two-way radios for communicating with family after the grid goes down.

THE RULE OF THREE

There are a number of things called the "Rule of Three," ranging from using threes to reinforce things in your writing, to making copies of your computer backup to making things easier to remember. My Rule of Three is to always have at least three ways to meet any of the basic needs: food, water, shelter, etc.

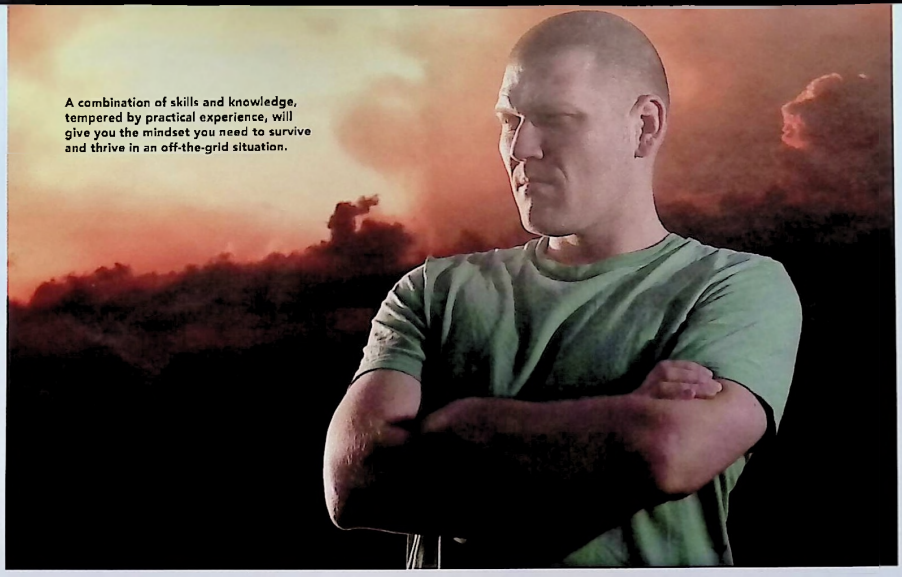
This way, when your primary method or source fails for some reason, you have a backup that works in a different way, and if that doesn't work or the situation changes, you even have a third approach to fall back onto.

Examples include:

Food: Groceries from the store, canned food from your pantry or fresh food from your garden

Water: Bottled water from your stores, water stored in your bathtub or water heater or water you filter from local streams or lakes

Fire/Heat: Isobutane camp stoves, charcoal grill or wood fire in a pit



A combination of skills and knowledge, tempered by practical experience, will give you the mindset you need to survive and thrive in an off-the-grid situation.

6 DEFENSE

This is a very personal category and you need to think this through before you decide what to get. You should at least have a non-lethal option to use to defend your family and your property, but these are short-range devices. So, you will also need a lethal option, loaded with whatever ammunition you want to get the desired effect, be it to scare off an intruder/attacker, wounding them or stopping them for good.

What to have on hand: AR-based rifle, shotgun with different barrels, handgun (pistol or revolver, your choice), a strong folding or fixed-blade knife in a 4- to 6-inch length and non-lethal tools, such as stun guns, Tasers, Kubotans or pepper spray.

BARTER

Supplies of things you might want to barter with, such as stockpiles of food or batteries, will eventually run out, especially in a long-term emergency. Having skills that others need, such as those listed below, will serve you well in terms of your own needs but, more importantly, as something you can barter with.

- Carpentry
- Farming and gardening
- Gunsmithing and reloading
- Hunting and butchering wild game
- Mechanical and automotive repair
- Medical and dental skills
- Plumbing
- Sewing
- Tactical and security skills

7 SANITATION

Nothing will ruin your day during a delightful summer power outage than a case of diarrhea or dysentery. Keeping sanitation in mind during a disaster is far more important than many people think.

What to have on hand: A bottle of scent-free chlorine bleach is useful for a wide range of tasks, from sterilizing your dishes to purifying water. (Scented bleach can be poisonous, which is why you always want unscented bleach.) Also, keep on hand any medications you are taking, as well as normal first aid supplies. Training in basic first aid, including knowing how to give CPR and how to handle severe bleeding, is something you and the rest of your family should invest in.

8 BARTER

When there isn't any electricity, all sorts of things stop working—from gas pumps to cash registers to ATMs—and you'll need to be able to offer somebody something you have that they want, which is known as bartering.

What to have on hand: Skills like carpentry, small-engine and automotive repair and hunting are all things that you can barter with for things that you don't have or have run out of during a long-term crisis. Items like cash, gold and silver will become the currency of choice during long-term situations as they have an understood value and you can "make change" by dividing them into smaller units.

If you want or can afford only one gun, a shotgun in either a 12- or 20-gauge configuration that uses interchangeable barrels may be your best option for a multi-purpose weapon for hunting and defense.

9 TOOLS

Having the basic tools your parents and grandparents kept around the house will also serve you well in an emergency.

What to have on hand: Basic hand tools, manual rather than battery or AC powered, will come in handy on a daily basis—these include hammers, hand saws, wrenches and screwdrivers, levels and tape measures. For general use, you should have a sturdy multi-tool that you can carry with you on a daily basis as well as a small flashlight.

10 MINDSET

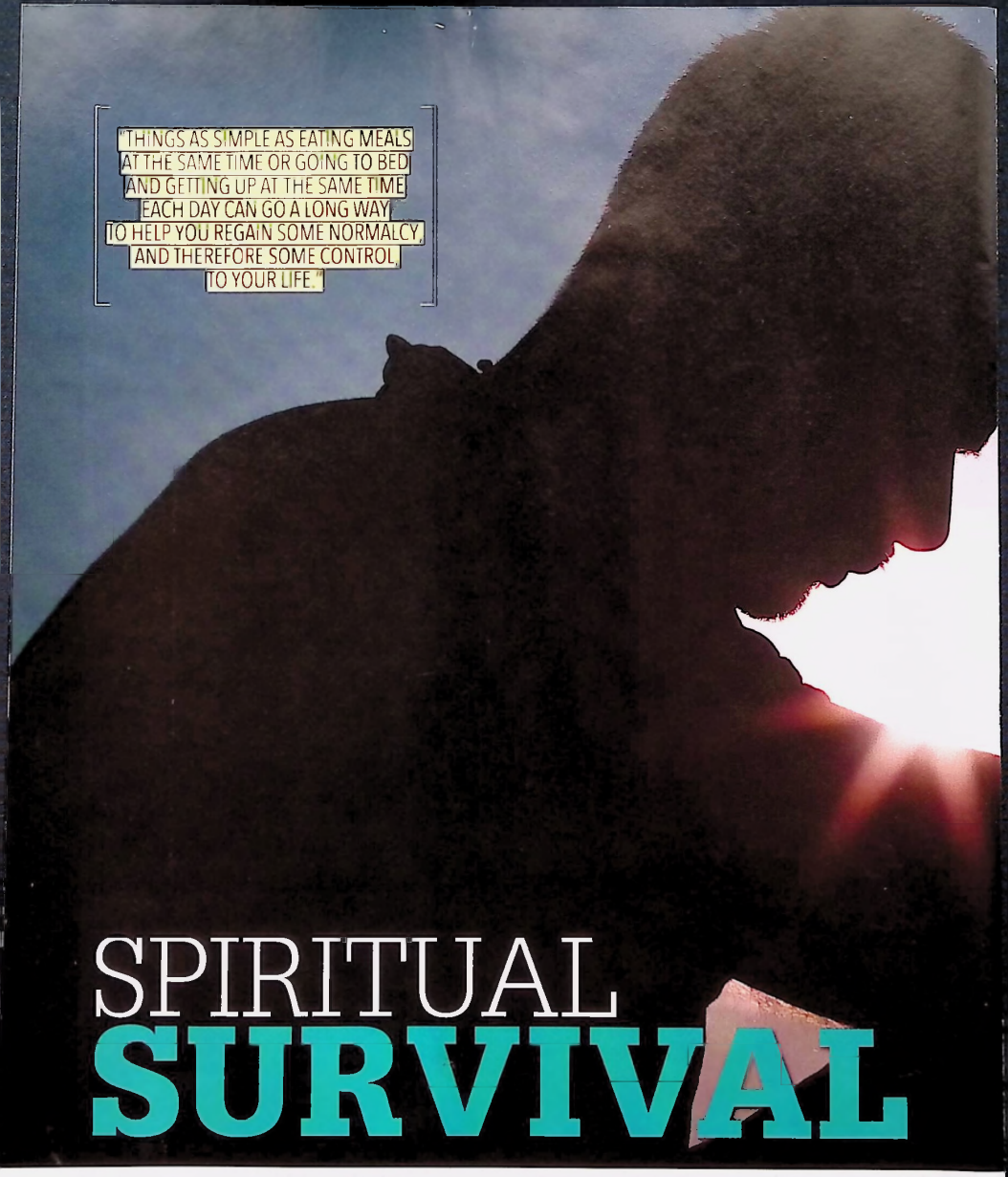
All the tools and supplies will do you no good if you are not confident that you will be able to overcome the challenges you are facing or that you will succeed in the end. The combination of knowledge, skills and experience gained through actually using what you have and what you know will give you the most important survival tool you can have: the confidence that you can handle whatever situation you face.

The right mindset is the key to overcoming your fear of the unknown, any frustration that comes from something not working the first time and doubts of being able to overcome your challenges. These are normal mental challenges we all face, even those who have been doing this for a while, but they are not insurmountable with the right attitude.

THE CHARCOAL GRILL

Whether you live out in the country, in a single family home, in a townhouse or an apartment, a charcoal grill will be one of your most versatile and useful survival tools. Grills come in a variety of designs and sizes, from the large ball-shaped kettles many of us grew up with that will work in most backyards or patios to small hibachi-style grills that work well on an apartment balcony.

These grills run on charcoal and wood, you don't have to worry so much about having enough fuel on hand like you do with stoves that run on liquid or gaseous fuels. The heat from wood or charcoal is enough to cook or reheat food, boil water or make soup and, with the cover on, bake.



"THINGS AS SIMPLE AS EATING MEALS AT THE SAME TIME OR GOING TO BED AND GETTING UP AT THE SAME TIME EACH DAY CAN GO A LONG WAY TO HELP YOU REGAIN SOME NORMALCY, AND THEREFORE SOME CONTROL, TO YOUR LIFE."

SPIRITUAL SURVIVAL

SIX STEPS TOWARD COPING EMOTIONALLY OFF GRID

By LARRY SCHWARTZ

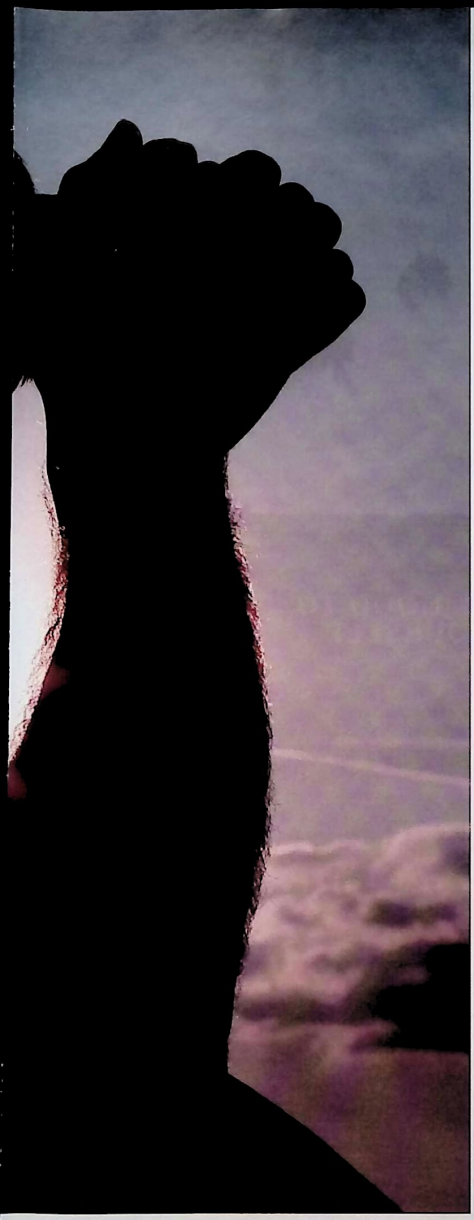


PHOTO BY THINKSTOCK

EVEN WITH YEARS OF TRAINING, none of us really know how we will react in an emergency or during a disaster.

We know how we want to act and how we think we will act, but until we are each actually in a crisis situation, we really don't know how well we will do.

There are several things you can do to help cope with the stress and pressures you'll face if the grid goes down. The following steps are based on guidance from the American Psychological Association, university research and other online and professional sources.

1 TALK ABOUT IT

Kent Harber, associate professor of pyschology at Rutgers University, observed that just by talking about their problems, earthquake survivors of the Los Angeles earthquake in 1994 found that their general attitude improved and their health actually got better as a result of the reduced stress that came from sharing what they went through and what they were feeling.

"So, don't keep your feelings pent up inside of you," Harber recommends. "Don't just sit by yourself and mope. Instead, find someone with a good ear and a shoulder you can lean on and start to let it out."

2 RE-ESTABLISH NORMALCY

We are all creatures of habit. We like to know what is going to happen next and we want to be able to plan on the future. As a result, getting back into or creating new routines and repeated tasks helps us to regain the sense of normalcy that was destroyed by the emergency we just survived. Things as simple as eating meals at the same time or going to bed and getting up at the same time each day can go a long way to help you regain some normalcy, and therefore some control, to your life.

3 PROFESSIONAL COUNSELING

You can't and shouldn't expect yourself to know how work your way through the stress of an emergency, or how to help others do the same. For that reason, seek out professional counseling from resources like the Red Cross or community disaster relief organizations.

A.I.M.

ANTICIPATE that you will be feeling worried or anxious and remember these are normal, although not always helpful, responses to a possible life-threatening situation.

IDENTIFY what the specific physical feelings associated with anxiety are and whether you are having any frightening thoughts that are adding to the fear.

MANAGE your responses using controlled breathing and self-talk so that you stay as calm as possible and can focus on the practical tasks that need attention.

SOURCE: www.psychology.org.au

FROM A CHILD's PERSPECTIVE

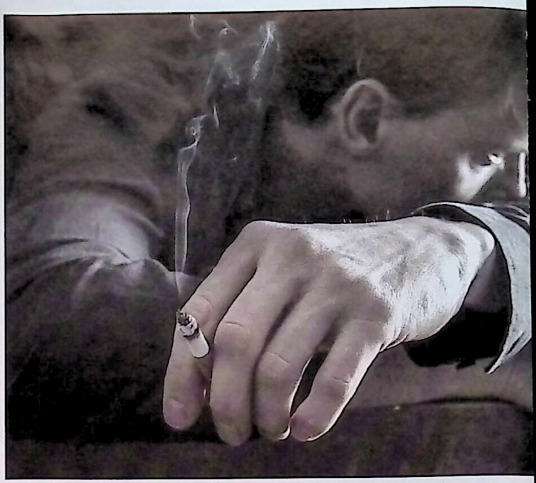
The National Association of School Psychologists (www.naspon-line.org) states that children may face long-term difficulties, such as PTSD, following a natural disaster. Those most likely to experience these difficulties may have experienced one or more of the following during the event:

- Had threats to their physical safety
- Thought they might die during the disaster
- Were very upset during the disaster
- Lost their belongings or house as a result of the disaster
- Had to relocate in the aftermath
- Attended schools following the disaster that had multiple schedule changes, double sessions or a lot of disruptions

A CHECKLIST

- Give yourself time to adjust.
- Ask for support from people who care about you and who will listen and empathize with your situation.
- Communicate your experience.
- Find a local support group led by appropriately trained and experienced professionals.
- Engage in healthy behaviors to enhance your ability to cope with excessive stress.
- Establish or re-establish routines.
- Avoid making major life decisions.

SOURCE: www.apa.org



Leaning on drugs and alcohol to help only makes things worse and leads to other problems for you and those you care about.

4 BE GOOD TO YOURSELF

The human spirit needs nourishment the same way your body needs food, so feed it by doing things that make you smile. Take a walk in the park, enjoy the sunset or sunrise each day, read a good book or spend time playing with your children or pets. Also, just as fatigue helps generate fear and despair when we are under stress, so does a strong and healthy body help us to keep our spirits up. Get back into or start an exercise program, avoid drugs and alcohol, eat regular balanced meals and get plenty of sleep.

5 STAY POSITIVE

As we see in every natural disaster that gets reported on the news, people are very resilient, and so are you. Be thankful for the fact that you made it through safely. Don't dwell on the bad news that comes from the news sources or online, and avoid it all together if necessary. Remember that any bad things that happened are in the past, so don't go over them in your mind. As surprising as it may sound, just telling yourself that "I am going to get through this" or "It's going to be OK" goes a long way in reassuring yourself.

The APA's brochure "Road to Resilience" provides good information in this respect and can be found at the APA's website at www.apa.org.

6 HELP OTHERS

Helping the other people around you—either adults, children or both—can also help you cope with what you are going through. It diverts your attention from your own situation and gives you the satisfaction that comes from helping others. Also, just as you should seek out those who care about you for someone to talk to

PHOTOS BY THINKSTOCK

Learning to help others can go a long way toward helping yourself.

"... UNTIL WE ARE EACH ACTUALLY IN A CRISIS SITUATION, WE REALLY DON'T KNOW HOW WELL WE WILL DO."

When disaster strikes, talking about your experience can assist with your mental survival.

about how you are feeling, you can be proactive and seek out your loved ones and friends and offer your "shoulder" to lean on and "ear" to listen to their story and feelings of stress.

DON'T GET BLINDSIDED

These steps are all based on what to do after you experience some sort of trauma in your life, from a natural disaster, loss of grid utilities, a traffic accident or other event. The Australian Psychological Society (APS) developed an acronym for the citizens of its country, which often has more severe natural disasters than we have seen here in the U.S. With an eye toward that fact that we often know that a disaster is coming, we can prepare ourselves ahead of time by remembering to A.I.M. (see sidebar).

THRIVE

Combined with the skills and tools described in this special edition of *American Survival Guide* and these new skills, you will be better equipped to face and overcome any off-the-grid situation you may have to face, whether it was planned or thrust upon you. ■■■

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PHOTO BY THINKSTOCK

IT'S NOW OR NEVER

HOW TO OVERCOME PROCRASTINATION, THE ENEMY OF SURVIVAL

By THOMAS J. NARD, Ph.D.

"BE PREPARED!"

It is more than just the Boy Scouts' motto. It is advice that can mean, quite literally, the difference between surviving or dying in an emergency. To paraphrase a well known proverb: Failing to prepare means preparing to fail.

We may laugh at the antics of a character in a sitcom frantically trying to read the directions on a fire extinguisher while flames dance on the furniture, but have you read those instructions? Some things are only funny if they are happening to the "other guy." Could it be that, in an emergency, you may actually be the "other guy."

For example, as a reader of *ASG*, you probably know what items should be in your personal disaster-preparedness kit. You probably know what food supplies you should have stored in your pantry and what needs to be in your first aid kit. You know you should have a family practice fire drill. You know that you should have fresh batteries available. Yes, you probably do know all the ways to be prepared. The real question is: Are you actually *doing* what needs to be done?

The lack of preparedness, all too often, is not due to lack of knowledge or information. No, the lack of preparedness is often for a very different reason. Procrastination is usually the culprit. People delay, they postpone, they make excuses. They find other things to do instead of what they know they should be doing. Are you guilty of procrastinating?

NOTHING MORE THAN FEELINGS

Ask yourself why you are procrastinating. If you're being totally truthful, you might admit that you just don't feel like doing it. You can't dispute your feelings; you feel what you

feel. But the problem is that feelings are not the best way to determine your actions. In fact, often, they are the worst way.

Survival is often about self-sufficiency. To be self-sufficient, you need to take responsibility and take control. This means doing what needs to be done, whether you feel like it or not. If you are waiting until you feel like preparing, you may never do so. A survival mindset means having the mental toughness to do what you must, whether you feel like it or not.

Survival is about being proactive and taking action. It is not about what you feel like doing. Remind yourself: This is what I need to do regardless if I feel like it.

ALL IN YOUR HEAD

If you want to change any behavior, you first need to change your thinking. Our thoughts determine what we do as well as what we don't do. To stop procrastinating about a task, you must first change your thinking about that task. In order to change your thinking, you need to identify what it is you are telling yourself. Our self-talk refers to our thoughts and the messages we give ourselves. Some self-talk is productive; some is self-defeating. We sometimes listen to the self-defeating comments more than to the productive ones. Unfortunately, we sometimes do not even recognize that we are giving ourselves self-defeating messages.

Let's identify and debunk some of the self-defeating messages that lead to procrastination. Let's replace those messages with more productive and constructive ones. Let's begin with a common belief that leads to procrastination: the thought that it is easier to avoid than to take action.

LAW OF PHYSICS

A law of physics tells us that a body at rest tends to stay at rest unless acted upon by an outside force. For many, procrastination is due to our natural tendency to want to stay at rest. We become victims of inertia. It is just easier to do nothing than to take action, or so it seems. The truth is that it does take effort to get moving. That is the price you must pay. The truth also is that lack of effort comes with a higher price. Short-term avoidance of effort can lead to long-term problems that can't be avoided.

Every time you surrender to inertia you are psychologically conditioning yourself to give up. The more you give up, the more likely that you will continue to give up. And, in crisis situations, giving up can prove fatal.

Have you ever had to push a car? It does take considerable effort to get the car moving. But once the car is rolling another law of physics kicks in. A body in motion tends to stay in motion. It is much easier to keep the car moving once you have overcome the initial inertia. So, too, in overcoming procrastination. Once you get yourself in gear, it is easier to keep going. So, when thinking about how much effort is required for a task, remind yourself that it does and will get easier.

IS IT WORTH IT?

When faced with a task, we might wonder, "Is it really worth it?" The real question you might want to be asking is, "Am I really worth it?" People often procrastinate due to the unrecognized belief that they do not feel deserving. Yes, it will take effort to get things done, but aren't you worth the effort? When people procrastinate and thwart themselves from reaching their professed goal, the question raised is whether they feel worthy of the goal.

If you do not really believe you deserve to succeed, you will not succeed. Instead, you will find ways to sabotage yourself. Procrastination is often a means of self-sabotage. If you believe you really deserve to reach your goal, you will reach it. Your belief will push you to overcome inertia and external obstacles. Your self-talk will be "Yes, it is a lot of work, but I am worth it."

PERILS OF PERFECTIONISM

It is surprising to discover that another common reason for procrastination is perfectionism. Perfectionism is often a hidden barrier to getting things done. There are "closet perfectionists" who do not even recognize how their unrealistic expectations for themselves can get in their way. They unconsciously fear not being able to do a "perfect" enough job. They fear criticism from themselves or from others, so they procrastinate. Rather than not meet the standard they demand of themselves, they put off doing things. They would rather hide behind the excuse of procrastinating rather than accept doing a job that is not "perfect."

Here, too, the solution lies in changing the thinking. Focusing on doing a "good" or "adequate" job is likely to overcome procrastination more than expecting a "perfect" job would. Survival, whether for an individual, a family or a nation, depends on preparedness. Crises by definition are unexpected. You cannot wait for the crisis to prepare for it. Procrastinating on preparedness can prove disastrous. Remember: "Now" spelled backwards is "won." To win, you must prepare now. ■■■

Thomas J. Nardi, Ph.D., is the director of the counseling programs at Long Island University Hudson Graduate Centers in Orangeburg, N.Y., and West Point, N.Y. He is also a psychologist in private practice and the creator of Eclectic Cognitive Behavior Therapy.

KEYS TO OVERCOMING PROCRASTINATION

- **Have a clear goal.** Know exactly what you need to do and why you need to do it.
- **Make short- and long-range goals.** Remember that the journey of 1,000 miles begins with the first step. Don't try to do too much at once. Smaller, realistic goals speed progress to the final destination.
- **Write it down.** Research proves that people are more likely to achieve a goal if they put it in writing rather than just thinking about it.

ROUND TO IT

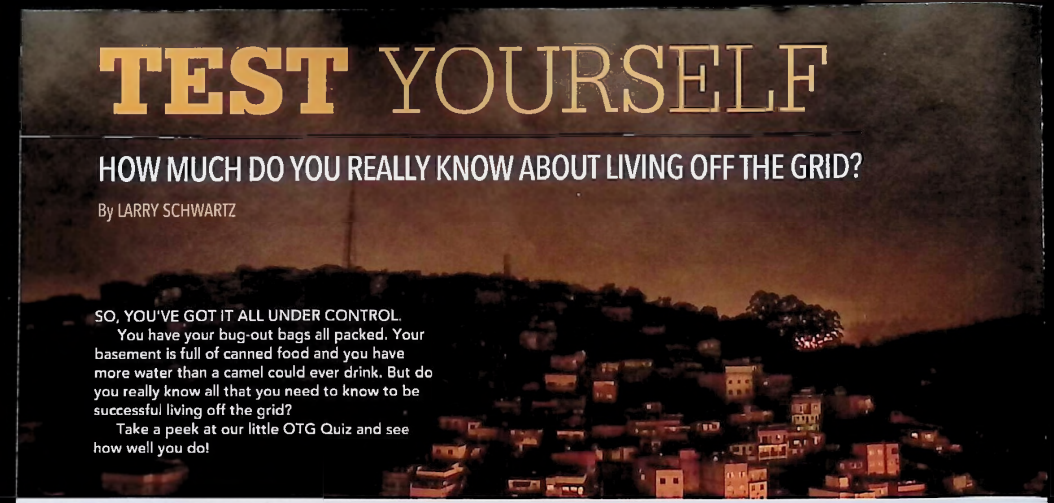
A patient once showed me several circular pieces of cardboard. Each was about 4 inches in diameter. On each one were the words "to it." He was proud of his collection of the pieces. He awarded one to himself each time he completed a task instead of just procrastinating.

"This is my reward," he said with a grin. "I did what I had to do. I got a round to it."

TEST YOURSELF

HOW MUCH DO YOU REALLY KNOW ABOUT LIVING OFF THE GRID?

By LARRY SCHWARTZ



SO, YOU'VE GOT IT ALL UNDER CONTROL.

You have your bug-out bags all packed. Your basement is full of canned food and you have more water than a camel could ever drink. But do you really know all that you need to know to be successful living off the grid?

Take a peek at our little OTG Quiz and see how well you do!

PHOTO: BY THINKSTOCK

1. What does "off the grid" mean?
A Not having access to the electrical power infrastructure.
B Unavailability or non-use of public utilities for power, sewage, water and communications.
C Providing for all of your needs while living away from society and civilization in a remote location.

2. True or False: The average walking speed for an adult carrying a pack and walking over gently rolling hills is 4 mph.

3. How do you pick the best generator for your home?
A Buy the best you can afford to buy.
B Calculate how many kilowatts of power you need to power the services you want and buy one that meets or exceeds that amount.
C Choose a generator that will support the amount of kilowatts that your home's circuit breaker panel is rated for.

4. What "on-the-grid" service is the most critical for you to produce for yourself when you go off the grid?
A Electricity
B Water
C Sewage

5. What colors on a topographic map indicate manmade objects?
A Green and brown
B Blue and red
C Red and black

6. True or False: An automatic transfer switch is designed to change your modern smartphone from cellular service to satellite service when you are out of your phone's service area.

7. True or False: A contour line indicates the areas where the same temperature is found on a weather map.

8. What is the cheapest way to generate your own electricity?
A Fuel-run generator
B Wind power
C Solar power
D Water power

9. True or False: It's illegal in some places to generate your own power and live off the grid.

10. Which is the most critical if you want to live off the grid?
A The right mindset, the right location, a power-generation system, a water-collection system and a waste-removal system.
B Be willing to learn new skills, be flexible, be observant, be stubborn, be willing to live lean, be willing to take care of your own things and learn to appreciate nature.
C A bug-out bag for all members of the family, a weapon for all adults in the group, water purification equipment and emergency medical supplies. ■■■

SOURCES: www.wildernessbackpacking.com; www.offgridsurvival.com; www.homeguides.sfgate.com

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HOW'D YOU DO?

Did you enjoy this little quiz? Maybe you learned something maybe you found out how much you don't know. Either way, check out the rest of this issue to get yourself prepared and equipped for life off the grid.

THE ANSWERS

1. (B) "Off the grid" can mean a lot of different things to different people, but for this quiz and for general use, the best definition is B, "Unavailability or non-use of public utilities for power, sewage, water and communications." **2. False.** The average walking or hiking speed for an adult is approximately 2.5 mph depending on terrain. Keep that in mind as you re-evaluate your bug-out plan to walk 15 miles out of the city carrying that 50-pound bug-out bag. **3. (B)** It is a little bit of all three, but the best approach is to determine what you need and then buy a generator that provides that and approximately 50 percent more. **4. (B)** When you come right down to it, electricity is a convenience (anyone who has spent a week camping in a tent knows it) and sewage can have all kinds of bad implications if you don't keep things clean, but water is a necessity that we use for so many things and you can't go without it for more than a few days. **5. (C)** Red and black; green indicates vegetation, red indicates roads, black indicates man-made structures like buildings, blue indicates water and brown indicates elevation. **6. False.** An automatic transfer switch is designed to switch your home's power from the utility to your backup generator. **7. False.** A contour line is a brown line on a topographic map that indicates where the same elevation or height is found, much like the isotherms on the weather map show the same temperature. **8. (C)** Solar power is the least expensive approach to generating and storing your own electricity, both from an initial outlay perspective and from a long-term perspective. **9. True.** In some jurisdictions, it is illegal for you to generate your own utilities (water, electricity, heat) or to not purchase those utilities from the jurisdiction. So, before you decide to make the move off the grid, check your local regulations to see what limitations you might have. **10. (A)** The right mindset coupled with the ability to meet your basic needs is key to successfully living off the grid.

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OFF-GRID OFF-ROADER

STAY OFF THE GRID AND REMAIN MOBILE WITH A UNICAT VEHICLE

By TORREY KIM • Photos Courtesy of UNICAT

LIVING OFF THE GRID OFTEN CONJURES VISIONS OF A UNIQUE YURT, CABIN OR HUT.

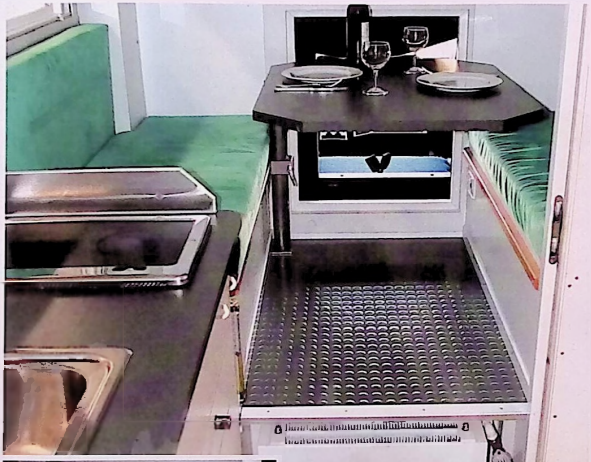
But the reality is that you can live the mobile life and stay far away from the grid if you have the right kind of survival vehicle. Whether your journey takes you to the desert, tundra or mountains, UNICAT has you covered with the perfect expedition vehicle.

Picture this: You're ready to cruise as many miles away from the nearest town as you can get, so you load up your MD58hv with 159 gallons of water in the freeze-proof tank, fill it with fuel and invite your family of six into the cab along with a few weeks' worth of groceries. Don't worry about having to stop at a hotel or rest stop along the way because you can get as far off the grid as your imagination can take you thanks to the vehicle's fully functioning kitchen, bathroom and sleeping area.

That's the beauty of the UNICAT expedition vehicle, which can get you off-road and onto your next adventure with the turn of a key. Load a few bikes or an ATV in the back and you can make the UNICAT your home base away from home and get even deeper into the woods. Head back to the vehicle at mealtime, when you can take your ingredients out of the refrigerator, create a meal and serve it at the dining area.

Choose from UNICAT's various options, including the following two models that we've spotlighted here.

The MD58hv is not only durable, it also has a sleek and attractive exterior that conceals the fact that it sleeps six.



The kitchen counter in the EX41-KD features an integrated stainless steel sink and cooktop as well as bunk beds and a separate bathroom.

The U-shaped dining area converts to a double bed when your meal is complete.

THE MD58HV

Built on a Mercedes-Benz Zetros chassis, the vehicle has a 326-horsepower engine and holds 79 gallons of gas, allowing you hundreds of miles of road time between fuel stops. You can also find the following features in the MD58hv:

- **Inner cab:** 228 inches long, 93 inches wide and 77 inches high
- **Windows:** Burglarproof, scratchproof, top-hinged windows made of double-insulated thermal glass with fiberglass frames
- **Seating area:** U-shaped seating for four to six people with swiveling table; the seating converts to an additional bed
- **Sleeping:** One double bed, two bunk beds and a door to the separate bedroom from the living room
- **Bathroom:** Shower, toilet, wash basin and storage with its own radiator
- **Kitchen:** Stainless steel sink, two-plate induction cooker, oven with microwave and grill, 34-gallon fridge, 17-gallon freezer and cabinets
- **Generator:** Air-cooled Honda generator installed in outside storage box
- **Water supply:** 159-gallon, freeze-proof drinking water tank, 15.9-gallon hot water heat exchanger with electric heater
- **Holding tank:** 26-gallon, freeze-proof sewage holding tank with drain pump
- **Accessories:** Heating, air conditioning and smoke detectors

THE EX41-KD

Based on a MAN LE 18.208 4x4 chassis, this expedition vehicle gives you 280 horsepower and holds 137 gallons of gas to keep you on the road for days. The EX41-KD also gives you these additional features:

- **Inner cab:** 158 inches long, 86 inches wide and 75 inches high
- **Windows:** Burglarproof, scratchproof, top-hinged windows made of double-insulated thermal glass with blackout and mosquito blinds
- **Seating area:** Features an adjustable swiveling table on a pedestal and converts to a double bed
- **Sleeping:** One double bed and two single beds
- **Bathroom:** Shower and toilet as well as storage with its own radiator
- **Kitchen:** Stainless steel sink, ceramic diesel stove, 51-gallon fridge with freezer and cabinets
- **Water supply:** 116-gallon, freeze-proof drinking water tank and 6-gallon hot water heat exchanger
- **Holding tank:** 10-gallon, freeze-proof sewage holding tank
- **Accessories:** Central heating system and antifrost system

UNICAT TRAINING

Once you take ownership of your dream vehicle, you won't be lost when it comes to operating it. In addition to offering serving and repairs, UNICAT provides training on how to use all of its vehicles' features so you'll never feel like you're in the dark about maintaining your vehicle.

FOR MORE INFO

To learn more about the UNICAT vehicles and how you can find yours, visit www.unicat.com.

BUG-OUT BAG BASICS

CHOOSE THIS IMPORTANT ITEM CAREFULLY–IT COULD SAVE YOUR LIFE

BUG-OUT BAGS are the cornerstone of any outdoor survival kit—don't leave home without them. In an off-grid situation, a bug-out bag could be your best friend.

These bags are a lot more than simply fancy backpacks. Think of your bug-out bag as your crisis bag; if an emergency were to strike, would you be prepared? Your bug-out bag should contain everything you need to survive for at least 72 hours on your own. It's an integral part of your emergency plan when you face an emergency head on.

If you're a real do-it-yourselfer, you can pack your own bug-out bag. For those who would rather leave the decision to the experts, you can purchase bags already filled with must-have items.

Without further ado, here are some great choices available on the market today.

Buyer's Guide

BAGS

"THE ORIGINAL THAT STARTED IT ALL."

1 5.11 TACTICAL

PRODUCT: BAIL OUT BAG
WEBSITE: www.511tactical.com
PRICE: $64.99

Specifications:
- 1050 Denier nylon construction
- Internal hook and loop closure for pull-out pouches
- Padded aero-mesh at rear to prevent abrasion
- Shoulder pad is removable for added speed

Defining Features: If it's good enough for the military and law enforcement, it's good enough for you. The 5.11 Tactical Bail Out Bag offers the ultimate level of comfort. It features a roomy storage compartment, side utility pockets and an adjustable strap with quick-release drop. The entire bag is made from lightweight, weather-resistant 1050D nylon to help you stay dry.

Manufacturer's Comment: *"The original that started it all. Internal and external MOLLE/SlickStick web gear platforms allow modular expansion, and an adjustable strap features a quick-release drop."* –DAVE RHODEN, LE BRAND MANAGER

2 KELTY

PRODUCT: REDWING 50
WEBSITE: www.kelty.com
PRICE: $124.95

Specifications:
- Panel loading
- Hydration compatible
- Water bottle pockets
- Side compression straps
- Large front pocket with organization
- Carry handle

Defining Features: If you're looking for a versatile bag, look no further than the Redwing 50 from Kelty. This dual-purpose bug-out bag is perfect for holding your essentials in an evacuation. Featuring a full-access U-zipper, the Redwing uses a single zipper to work both as top loader and a panel loader.

Manufacturer's Comment: *"The best-selling pack in the Kelty lineup is also the best-selling pack in the outdoor industry . . . for good reason. Highly utilitarian, the Redwing has all the features and organization needed for simplified travel."* –SCOTT KAIER, PUBLIC RELATIONS MANAGER

"THE BEST-SELLING PACK IN THE KELTY LINEUP IS ALSO THE BEST-SELLING PACK IN THE OUTDOOR INDUSTRY ..."

"THE SOLITUDE PLUS WAS REDESIGNED FOR 2014, MAKING AN ALREADY POPULAR PACK EVEN BETTER! "

3 ALPS $493

3 ALPS

PRODUCT: SOLITUDE PLUS
WEBSITE: www.alpsmountaineering.com
PRICE: $493

Specifications:
- Color: Blue
- Fabric: Polyester ripstop
- Capacity: 3,100 cubic inches (50 liters)
- Weight: 3 pounds, 12 ounces

Defining Features: The Solitude Plus was recently redesigned to make everyone's favorite bug-out bag even better. There is ample storage–the outside zippered pockets, lower side neoprene pockets, main pocket and front pocket give you plenty. There is even more space to stock everything you'll need for an evacuation.

Manufacturer's Comment: *"The Solitude Plus was redesigned for 2014, making an already popular pack even better! The multiple pocket configurations offered on this pack allow the users to store and organize their gear and always have everything easily accessible. This pack is great for various applications and is definitely a must-have!"* –SARAH ECKELKAMP, MEDIA RELATIONS

4 EAGLE CREEK $160

"THE SYSTEMS GO IS THE PERFECT BAG FOR THOSE WHO LIKE TO STAY ORGANIZED ON THE GO."

4 EAGLE CREEK

PRODUCT: SYSTEMS GO DUFFEL PACK 60L
WEBSITE: www.eaglecreek.com
MSRP: $160

Specifications:
- Easy pack, ¾ front panel opening
- Laptop sleeve
- Lockable separate bottom compartment with zipper for access from main bag
- Multiple grab handles
- Backpack straps detach and combine to form cross-body strap

Defining Features: If you're looking for a simple way to organize your evacuation gear on the go, Eagle Creek has your solution. Built with burly, waterproof Bi-Tech fabric, the Systems Go packs are designed for organization. Sized to perfectly fit five Pack-It Half Cubes or Pack-It Specter Half Cubes or larger, the Systems Go Duffel Pack will keep you organized no matter how fast you have to bug out.

Manufacturer's Comment: *"The Systems Go is the perfect bag for those who like to stay organized on the go. Innovative adjustable straps allow you to carry it as a duffel bag or a backpack to best optimize comfort and carry speed."* –ALLI NOLAND, PUBLIC RELATIONS MANAGER

"THE ECHO-SIGMA BUG OUT BAG IS A FULL-SIZED, FULL-FEATURE EMERGENCY KIT ..."

5 ECHO-SIGMA $499.99

5 ECHO-SIGMA

PRODUCT: BUG OUT BAG
WEBSITE: www.echo-sigma.com
MSRP: $499.99

Specifications:
- Three Day Pass backpack by Sandpiper of California
- Hydration bladder drinking system (2.5 liters)
- Suisse Sport McKinley 0 to 5 degrees Fahrenheit mummy sleeping bag
- Echo-Sigma Provision Pack (three to 10 days)

Defining Features: Fully assembled and ready to go out of the box, the Echo-Sigma Bug Out Bag is truly a turnkey solution. Name-brand products and a well thought-out assembly round out a great package designed to sustain you for three to 10 days. It comes with a vertical storage configuration and custom pull-string dust cover, making it easy to store in any location and retrieve at a moment's notice.

Manufacturer's Comment: *"The Echo-Sigma Bug Out Bag is a full-sized, full-feature emergency kit that provides food, water, shelter, tooling, lights, communication and much more."* –JACK NOURI, OWNER

6 MAXPEDITION $167.99

"WITH 21 LITERS OF STORAGE, THERE'S AMPLE ROOM TO FIT YOUR EMERGENCY SUPPLIES."

6 MAXPEDITION

PRODUCT: FALCON II BACKPACK
WEBSITE: www.maxpedition.com
MSRP: $167.99

Specifications:
- Overall size: 10 inches (L) x 12.5 inches (W) x 17.5 inches (H)
- Volume: 1,300 cubic inches/21 liters
- Two compression straps made from 1-inch webbing
- Non-slip, abrasion-resistant material

Defining Features: The Maxpedition Falcon-II is a bug-out bag designed with comfort in mind. It is made of durable 1050 Denier water- and abrasion-resistant nylon, which can withstand the punishment of being in the outdoors. It's ergonomically designed with padded shoulder straps and sternum and waist support, so you'll arrive at your destination pain-free. With 21 liters of storage, there's ample room to fit your emergency supplies.

"... THE PERSONAL 72-HOUR KIT IS A GREAT START FOR YOUR EMERGENCY PREPAREDNESS PLAN."

7 EMERGENCY ESSENTIALS $124.70

7 EMERGENCY ESSENTIALS

PRODUCT: PERSONAL 72-HOUR EMERGENCY KIT WITH MRES
WEBSITE: www.beprepared.com
MSRP: $124.70

Specifications:
- Waterproof matches
- MRE entrees and side dishes
- Multiple hand and body warmers
- First aid and sanitation items
- Contains more than 60 lifesaving items

Defining Features: Whether you're stranded on the highway during an ice storm or deep in the woods, you'll feel safe knowing you have the Personal 72 Hour Emergency Kit by your side. Don't let its size fool you–this tight bag contains everything you'd need in an emergency. It has all the basics plus a wide assortment of tasty food to chow down on.

Manufacturer's Comment: *"This compact personal emergency kit contains most of the basics one person will need to survive the first three days of an emergency. With a delicious assortment of meals ready to eat and provisions for water, basic shelter, lighting, first aid, hygiene, warmth and more, the Personal 72-Hour Kit is a great start for your emergency preparedness plan."*
–KELLY ANDERSON, PR MANAGER

8 SPEC-OPS $140

8 SPEC-OPS

PRODUCT: RECON RUCK ULTRA TACTICAL RUCKSACK
WEBSITE: www.specopsbrand.com
MSRP: $140

Specifications:
- Main compartment plus three additional pockets
- Total Capacity: 2,285.5 cubic inches
- Removable 2-inch, adjustable waist belt
- Made In the U.S.

Defining Features: The Spec-Ops Recon Ruck Ultra - Tactical Rucksack is made from durable 1000 Denier Cordura nylon fabric. It's perfect to serve as a bug-out bag, but it can also be worn as an assault pack. It has super comfortable and functional MTX shoulder harness system to ensure it doesn't cause you back discomfort. It has ample space to store all your 72-hour emergency supplies.

"IT'S PERFECT TO SERVE AS A BUG-OUT BAG, BUT IT CAN ALSO BE WORN AS AN ASSAULT PACK."

9 EMERGENCY ESSENTIALS

PRODUCT: COMP I ONE-PERSON EMERGENCY KIT
WEBSITE: www.beprepared.com
MSRP: $330.42

Specifications:
- Weight: 36 pounds
- Dimensions: 19 ¼ inches x 13 inches x 16 1/8 inches
- Contains MRE entrées and side dishes, fuel-fire starter, emergency sleeping bag, N95 respirator mask, 156 first aid items, sanitation supplies and more

Defining Features: The Comp I Emergency Kit contains a collection of emergency preparedness items to help you be fully prepared when you need to be. The large and durable bag holds more than 280 essential emergency supplies to ensure you'll be well stocked no matter what the emergency. It has everything you'll need to survive for three full days on your own.

Manufacturer's Comment: *"If you want to gain confidence in being prepared for the first three days of an emergency, this emergency kit is for you."*
–KELLY ANDERSON, PR MANAGER

"IF YOU WANT TO GAIN CONFIDENCE IN BEING PREPARED FOR THE FIRST THREE DAYS OF AN EMERGENCY, THIS EMERGENCY KIT IS FOR YOU."

9 EMERGENCY ESSENTIALS $330.42

HOMESTEAD

IN THIS SECTION THE OTG FAMILY + GETTING STARTED + MEAT&FISH PRESERVATION

HOME ON THE RANGE

Start Living A Life That's Self-Reliant

PHOTO BY THINKSTOCK

WHEN YOU TALK ABOUT GOING OFF GRID, you're talking about being self-reliant. And nobody does self-reliant better than the modern homesteader. Between growing their own food and providing their own utilities, homesteaders will be ready for pretty much anything when the grid ultimately goes down.

But being a homesteader is more than just finding a cabin and planting a garden. It requires dedication and organization.

Not sure how to start? Don't worry—we've got you covered. In the following section, we'll introduce you to a family that not only survives but thrives off the land by planning well and working with Mother Nature. Next, school is in with expert homesteader Merlyn Seeley, who has some bare-bone basic tips for getting newbies started. Last but hardly least, learn how to make your meat last all winter with delicious ways to cure and preserve your catches.

Roll up your sleeves. It's time to start living off the grid and down on the homestead.

HAPPY HOMESTEADERS

PHOTO BY THINKSTOCK

INSIDER TIPS FROM A SUCCESSFUL OFF-GRID FAMILY

By ALEX LAGRAND

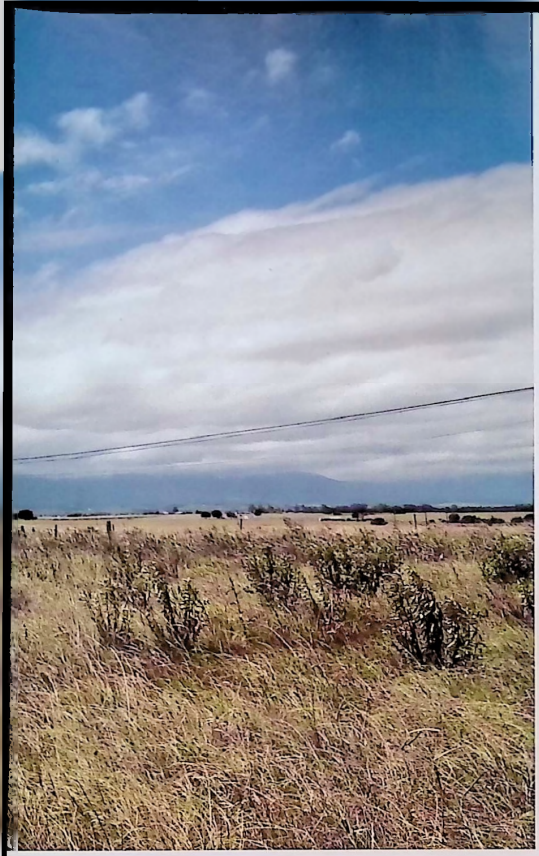
MANY PEOPLE EMBARK ON A HOMESTEADING LIFESTYLE as a personal choice after conducting much research to answer questions such as "How will I take care of my basic needs," "How will I maintain a successful homestead" and, most importantly, "How will I be able to make the transition to a life of homesteading?" Making the transition alone is one thing, but making the transition with a family only magnifies the challenges.

With a model like the family of Abe and Josie Connally, owners and operators of VelaCreations, a homesteading how-to blog, the goal of making your family homestead happen can certainly be achieved. Read on for insider tips on how to get started today.

A NOTEBOOK (OR 10)

One thing that is continuous with the Connally family is organization. Nothing can be achieved without some sort of framework for ideas and concepts that are waiting to be implemented. Maintaining a successful homestead cannot be achieved without some method of organization.

One way to maintain this organization is the use of



"MAKE LISTS OF THINGS YOU NEED TO BUY AND DO, PLANS, RESEARCH, COST ANALYSES, COMPARISONS. IT REALLY HELPS TO WRITE THINGS DOWN AND SEE THEM ON PAPER."
–ABE CONNALLY, VELACREATIONS

BUILD A RAIN CATCHMENT

Do you want to build your own rain catchment like the Connallys? WikiHow has published a how-to article on how to build your own rainwater collection system in just four easy steps. Visit the website at www.wikihow.com/Build-a-Rainwater-Collection-System to see how you can get started with having your own natural source of water.

NOTEBOOK FOR EVERYONE

Some of the most durable notebooks available for purchase are Moleskines. This brand of notebooks is used by a wide range of people, including those who enjoy the outdoors. Moleskines are constantly given high approval ratings, and those who purchase them are rarely disappointed. If you are interested in purchasing a Moleskine for your homesteading and organizational needs, visit the official website at www.moleskine.com or visit a retailer near you.

notebooks and seeing ideas on paper.

"One of the best organizational tools that you can buy is a notebook (or 10)," the Connallys explain from one of their blog posts on organization. "Make lists of things you need to buy and do, plans, research, cost analyses, comparisons. It really helps to write things down and see them on paper. Plus, there's the added advantage of being able to look back and see something that you thought you had forgotten about. We have spent almost as much time scribbling things down in our notebooks as we have in actual execution."

Keeping a notebook or journal is the easiest way to not only maintain organization, but to ensure a successful homestead. Notebooks are easy to carry and offer endless opportunities for ideas to be planned out and executed later on.

The use of notebooks is certainly not for everyone—not everyone likes to scribble or jot ideas down—and that's perfectly OK; however, in maintaining a homestead, it is highly suggested to have some sort of organized plan in order to ensure success. Abe Connally emphasizes that organization is key to making a homestead happen.

MOTHER NATURE

The chief needs of humans are, simply put, food and water. With homesteads maintaining a sustainable lifestyle of producing your own food, it may be tricky, at first, if you have little to no experience; however, nothing is ever impossible. The means of producing your own food and collecting water can easily be achieved with some helpful advice from the Connally family.

The family's favorite source of water is its rain catchment. In short, a rain catchment is a way of collecting rainwater to put to use for other things.

"A rain catchment system consists of a collection area or roof, gutter and piping, a storage tank and a delivery system," according the Connally family. A rain catchment system is one of the easiest ways to gain access to an efficient water source.

As for food, when people think of a homestead, they think of planting and farming. Homesteading is all about subsistence and maintaining a sustainable lifestyle. Producing your own food helps to achieve that.

One of the tools that the Connally family uses to produce

"GET USED TO LIVING AT THE WHIM OF MOTHER NATURE, OUT IN THE ELEMENTS. GET TO KNOW AND LOVE HARDSHIPS AND APPRECIATE THE FINER POINTS OF LIFE THAT MONEY CAN'T BUY."
—ABE CONNALLY, VELACREATIONS

Gardens and small farms are integral parts of homesteading that allow a homesteader to produce and cultivate his or her own organic food.

PHOTO COURTESY OF ABE CONNALLY

Abe Connally with his son. Homesteading with children can provide unique obstacles that you wouldn't have to go through otherwise, but it also provides many rewarding experiences and lessons that you wouldn't have had the opportunity to experience otherwise.

its own food is a wicking bed. The Connallys explain on their blog that "a wicking bed consists of a basin of gravel with rich soil on top of it. There is a pipe set into the gravel, which bends and rises to the surface for watering. This is how you water your plants. The water settles in the gravel and is wicked up by the soil to the plants' roots. It is very conservative with water, as it doesn't lose as much to evaporation as surface watering." They further explain that a wicking bed is perfect, as it does not take up much space and is very flexible in constructing it.

In regards to both water and food, Abe Connally explains that, as a homesteader, you must "get used to living at the whim of mother nature, out in the elements. Get to know and love hardships and appreciate the finer points of life that money can't buy." Producing the basic necessities of life is difficult but certainly rewarding in the end.

GREEN POWER

Through the complex web of questions people have before they embark on the journey of homesteading, there is almost always the question of power: How do homesteaders produce their own energy source? The answer is simple and efficient: green power.

Green power can be defined as renewable energy that provides little to no detriments to nature. Some forms of green power that the Connallys use include solar power, wind power, biofuels and hydropower. All of these sources are powered

Homesteaders Abe and Josie Connally hard at work on their current family homestead, which they began cultivating back in 2007.

solely by forces of nature and can be used for various needs, such as electrical and heating.

Solar power involves transforming the sun's rays into a power source via the use of solar panels. While these panels often need to be purchased, they offer an efficient way to collect energy daily.

Wind power involves transforming the force of wind into a power source via the use of wind turbines or generators. These generators can typically be purchased or constructed and are often inexpensive to implement. If a homestead is in a particularly windy part of the country or world, wind power could be the perfect alternative to typical power sources.

Biofuels involve the organic waste of living organisms and using that to produce heat, combustible gas and even a fuel for electricity-producing generators, according to the Connallys.

Finally, hydropower is the most-known form of renewable energy. Hydropower is extremely reliable and can be used to generate many forms of electricity. Water is powerful, and to harness this source of energy is to have a stable form of power.

The Connally family utilizes all four of these green sources of energy. In doing so, they maintain a sustainable and environmentally friendly way of fulfilling their power needs.

Alex LaGrand is a North Carolina-based freelance writer who enjoys writing about various topics, particularly the outdoors and the military.

THE FAMILY

Abe and Josie Connally are a couple who have been together for the past 11 years and have young two children. As two people unafraid of taking on new challenges, they were intrigued by the homesteading lifestyle and took it on in a steadfast way. They began their journey living in a bus and have evolved to having built two homes for themselves throughout the years. They adore the off-grid life in addition to what nature has to offer. With the unique challenge of raising two children while maintaining a homesteading life, they have accomplished it and continue to be successful in their homesteading endeavors. For more information on the Connally family, visit their website at www.velacreations.com.

CONTACT

For more information on the use of green power and sustainable energy, visit the Environmental Protection Agency's website for a network of resources, ranging from how to buy green power and various green power communities throughout the country, at www.epa.gov.

NEW BEGINNINGS

GET INTO THE OFF-GRID GROOVE WITH INFO FROM HOMESTEADER MERLYN SEELEY

Text and Photos by MARILYN SEELEY

LIVING IN THE MIDDLE OF NOWHERE FORCES YOU TO KEEP IT SIMPLE.

Moving off grid affords you a freedom that's truly liberating and well worth the adjustments you have to make.

Read on to find out how I live off the grid in a one-room, lofted-barn-style cabin in the middle of the Ozark Forest in southern Missouri.

THE RIGHT MINDSET

To get started living off the grid, you just have to take a leap of faith and go for it, period. It's a huge decision, yes, but today, there are ways of sampling different lifestyles without turning your life upside down all at once.

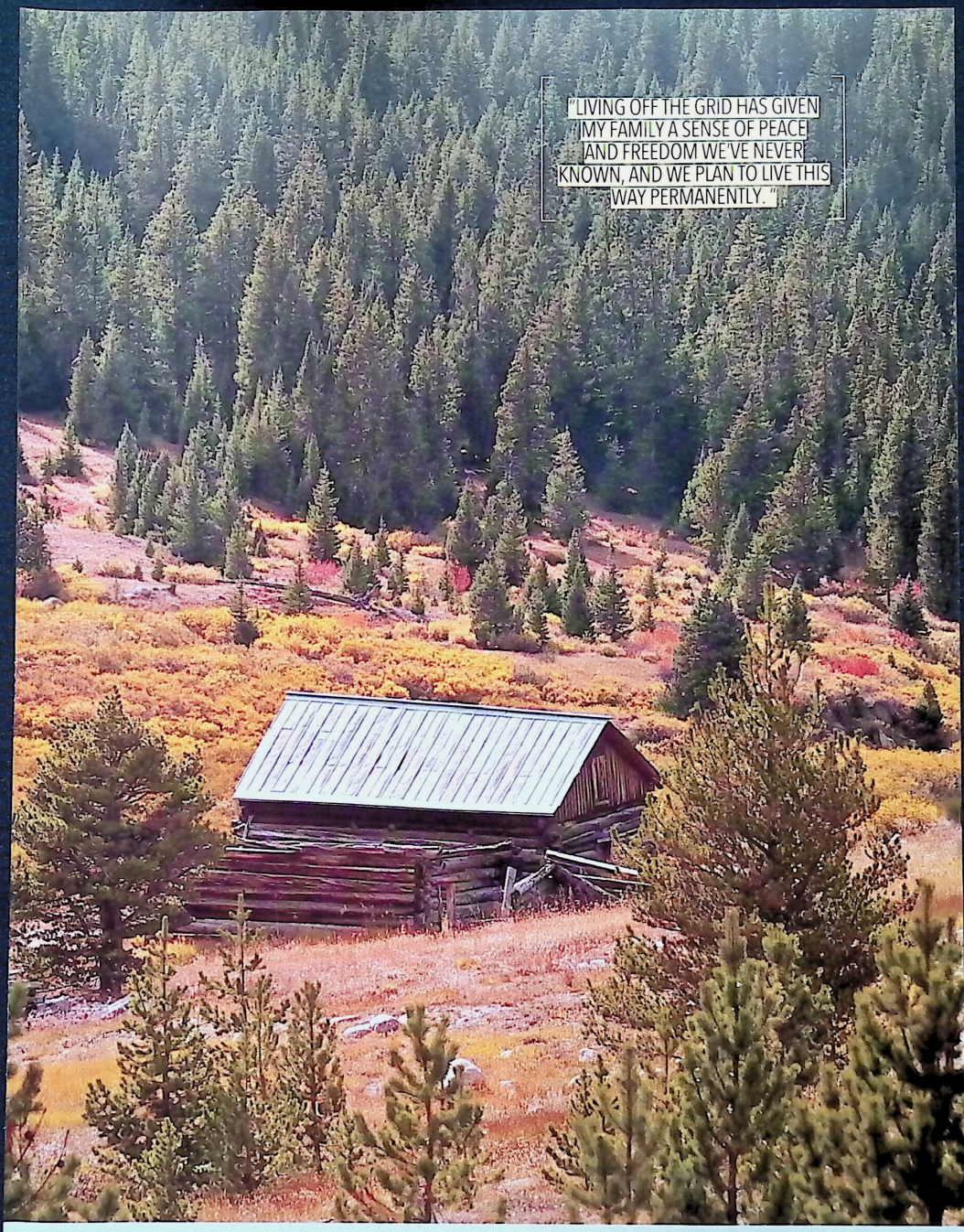
Living off the grid has given my family a sense of peace and freedom we've never known, and we plan to live this way permanently.

After we got through the pitfalls—mostly through trial and error—we decided this is the lifestyle for us. Could it be the one for you?

SECURE LAND: LESS THAN $500

Maybe you're wondering just how you're going to move off grid and live on your own piece of organic, eco-friendly land without any money or any good credit. You don't need good credit or a lot of money to buy some land and live off grid—in fact, you can secure land for as little as a few hundred dollars down.

If you're not particular about where you want to live, just as long as you own land and can live off the grid in harmony with nature, then you can go to www.classiccountryland.com and find land in many states where it will cost you just $299 down and $200 in closing costs. Your first payment won't be due for 45 days, and you can choose a 15- or 30-year mortgage. You can do the whole deal over the Internet, phone or mail in as little as an hour! All you need is an email and $499 and you will



"LIVING OFF THE GRID HAS GIVEN MY FAMILY A SENSE OF PEACE AND FREEDOM WE'VE NEVER KNOWN, AND WE PLAN TO LIVE THIS WAY PERMANENTLY."

Raising chickens is a must if you live off the grid and are looking to become as self-sufficient as possible with your food supply. Chicken and chicken eggs are a great source of protein.

Raising rabbits is one of the best ways to ensure a sustainable line of food for your family. Rabbit meat is lean, healthy and GMO free if you feed your rabbits natural food.

PHOTOS BY THINKSTOCK

Cooking over an open fire is one way to maximize your cooking ability off the grid, keep it traditional and keep the temperatures down in your cabin during the hot seasons.

You'll need a way to keep warm during cold seasons, and wood heat is sustainable and cheap, especially if you own land with trees.

own some land in a day! We went through this site when got our first 12 acres of off-grid land a few years ago and had a great experience.

Also, check out www.ozarkland.com; a lot of these partial land packets are smaller but cheaper, too. It works the same way: no credit—nothing but a money exchange and you own the land in a few hours. You send the money and they send the contract; all you have to do is e-sign. Some of the partials have ponds and cabins on them, too, which is an added bonus!

These companies genuinely want you to own land; they don't care about your credit and won't even ask you for your social security number because it is irrelevant. As long as you send your monthly payment, you're good, and you can even pay your monthly note on the website with a prepaid credit/debit card.

FOOD SOURCE

Part of learning to live off the grid is re-learning everything you already know. Food is an important consideration in off-grid living and you need to learn not to rely on supermarkets for the bulk of your supplies.

Enter organic gardening skills—you should master them. Research and learn as much as you can about gardening, making natural fertilizers, using natural pesticides and building a greenhouse. An important part of gardening is getting a set of non-GMO, heirloom

The Seeleys, at home in front of their one-room cabin.

seeds and then learning to save them. Next, start passing the seeds out and become a front-line patriot to help us take back our seeds! It's all part of living off the grid.

Food sources can include raising chickens, rabbits, goats and pigs because living off grid is all about labor, and you need protein to sustain your energy. Raising rabbits is one of the best things you can do because the meat is lean and healthy and they reproduce every 30 days or so, ensuring a constant supply.

MAKING MONEY

Even if you move off grid, you'll have some sort of bills to pay, even if it's just for the land or for animal feed.

Look for ways to make "natural money," which means using your land to provide some of your income. If you have a stand of trees that you can spare, you could sell them to a logging company. If you have a large area of land you own, you could rent it to hunters. With land ownership comes resources. You'd be surprised, too, by what people will buy, including things like moss, rocks and sticks! You could also make and sell walking staffs, grow and sell seedlings, and produce and sell a wide range of homemade goods.

We at the Shikata Homestead have sold handmade blankets, wash cloths, clothing accessories, herbal tinctures, veggies, eggs, animals … the list goes on. You can also take your things to local farmers' markets.

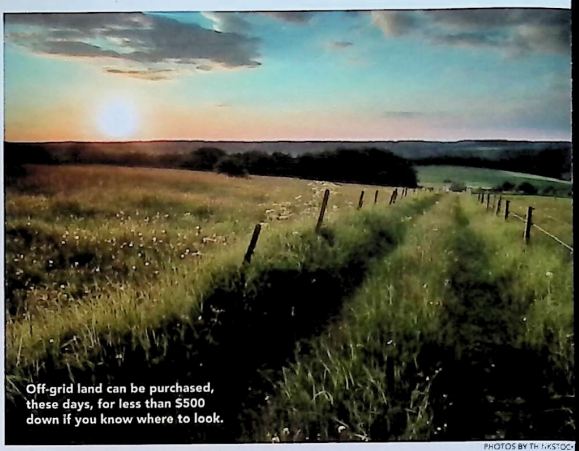
FOR MORE INFORMATION

To learn more about homesteading and living off the grid, visit our blog at www.shikatahomestead.com or check out our books, "Living Off The Grid With Merlyn Seeley" and "Living Off The Grid: A Beginners Guide," on www.amazon.com.

IT AIN'T EASY

You have to be realistic about homesteading. It's not just fun and games and peaceful living. There's a lot of hard work involved! We wanted to share our lifestyle with friends, so we developed our homestead into an eco-village of sorts. We have watched many friends come for a visit and decide to give up because of all the hard labor. Be warned: Homesteading is not for the faint of heart!

A wood stove is a great main source of heat and cold-season cooking if you are totally off grid.



Off-grid land can be purchased, these days, for less than $500 down if you know where to look.

PHOTOS BY THINKSTOCK

"YOU HAVE TO BE REALISTIC ABOUT HOMESTEADING. IT'S NOT JUST FUN AND GAMES AND PEACEFUL LIVING."

PREPARE

- Think about the knowledge you already have that could be useful
- Move to off-grid life gradually.
- Visit an off-grid homestead or community first.
- Research subjects that will be useful off the grid.

QUICK TIPS

- If you need a break from the lifestyle in transition, take it.
- It's a lot easier to live off the grid with a partner.
- Look for ways to make your life easier rather than roughing everything.
- Get involved in a traditional art/skill, such as wood working; this can relieve stress and help you make money.

ELECTRICTY

If you want electricity off the grid, you'll be looking into solar, wind or some other power source. Remember that you'll be disconnected from a traditional source of power and technological grids.

If you choose solar or wind, you will incur a debt, and solar and wind energy is not cheap. Good solar batteries can cost up to $300 and a good solar panel will run you a few hundred, as well. Whatever you choose, make sure you have a back-up generator.

At the Shikata Homestead, we choose to live with no electricity, but there are options for those who want it. We light our one-room cabin with oil lanterns that we fuel with rendered-down pork fat. During the day, we take advantage of the sun; we installed more windows in strategic locations in our cabin to take advantage of the light.

You can use propane, an open fire or a wood stove to cook on or provide heat, so there is really no need for electricity for those purposes. As far as cooling goes, during the hot summer afternoons, we utilize the local cool river to cool off and take advantage of good shade and cool clothing. We have no need for an air conditioner.

If you do go the route of making your own electricity, start small and add what you need to the system.

SANITATION AND WATER

Compost, compost, compost. If you are going to be gardening, then you will need fertilizer. Did you know that in two years, composted human manure is rendered into usable soil that can be used in your garden and around trees and bushes? Your key to good sanitation is doing it properly and promptly.

Off-gridders often use a compost toilet setup, which translates to basically an outhouse with either a pit or a bucket in it. The bucket method has to be hand dumped into a compost pile that should be secure. The pit method can be labor intensive, as it must be uncovered every so many years and moved. Also, the pit method does not render usable fertilizer.

Raising animals is a dirty job, so at the Shikata Homestead we have

hand-washing stations in which we change the water daily, and we make sure to wash up after dealing with animal care and cleanup.

When it comes to water, there are many ways to obtain this most important resource. You could make sure the property you buy has a water source on it in the form of a spring or waterway. You could also bring your water in from a reputable source using a truck and water barrels. You can also install your own shallow for a few hundred dollars.

If your plot of land is located near a spring-fed river, you could gather water there. With something as simple as a sump pump, a water hose and a 750-watt converter, you could collect water from a natural source near your land. All you have to do is connect the power converter to the vehicle battery, plug in the sump pump and toss it in the water. A hose will divert the water into collection barrels in your vehicle.

When it comes to purifying and filtering the water you collect, whether it is rainwater or wild water, you can use iodine crystals to purify and a simple bandana to filter out any debris. Rainwater collection can be done in any clean container and store in closed water barrels until needed. Collecting rainwater is also a great way to water the garden and animals.

GET STARTED

If you're waiting for the catch, there isn't one. Get yourself some land right now, move to your paradise and start living a healthier and happier lifestyle. After you taste living off grid in the peaceful country, you won't want to return to "normal" society.

Organic gardening is another source of food off the grid. Master this skill and your family will never go hungry.

PHOTO BY THINKSTOCK

CHECK OUT OUR NEW PRODUCTS FOR 2014!

EMERGENCY FOOD WATER & SUPPLIES
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SurvivalBagsInc.com

We carry a full line of trusted survival products including:

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LifeStraw • Fox Tactical • CRKT
Camo Unlimited • UST
and many more.

BBB ACCREDITED BUSINESS

WARNING – THESE SURVIVAL BAGS ARE NOT FILLED WITH TOYS

FINDING A CURE

HOW TO PRESERVE MEAT AND FISH OFF GRID FOR YEAR-ROUND CONSUMPTION

By MICHELE DOELE

LIVING OFF THE GRID and providing food for yourself and your family by hunting, fishing or farming is not only a necessary endeavor, it's a healthy, money-saving one, as well.

Making your foods last through the year is one of the fundamental keys to survivalist nutrition. Butchering a deer, cow, moose or pig will leave you with more meat than you can consume immediately. Freezing is usually the go-to option, but what if your freezer is full, you don't have a freezer or you want to try a different approach? There are several curing options that give you flexibility and also change up the flavors of your bounty.

CHOOSE YOUR METHOD

While there are many different ways to cure food, from pickling to smoking, we will focus on the methods that result in longer-term storage solutions for meat and fish. Salting and dehydrating give the best shelf life so you can stretch your proteins throughout the

"THERE ARE NO WRONG ANSWERS; IT IS ALL ABOUT YOUR TASTE PREFERENCES."
–CHEF FLORIN ANTON, THE BRADLEY INN

year with little waste. Chef Florin Anton, who has been in the food industry for 13 years and specializes in charcuterie (processed cured meats), says that cured meats are safe as long as you follow some simple rules.

"You can decide on what method you like best by experimenting with different methods for different types of meat. I personally like salt-curing beef; it intensifies the flavors, especially in cuts with little or no fat," he says. "And the supplies are inexpensive and easy to find."

Jerky is the result of dehydrating your meat over a very low heat for a long period of time. This process will provide you with a tasty, high-protein treat that is pre-portioned and portable so you can easily take it with you hunting, camping or hiking. If you have kids around, this snack is a must-have crowd pleaser.

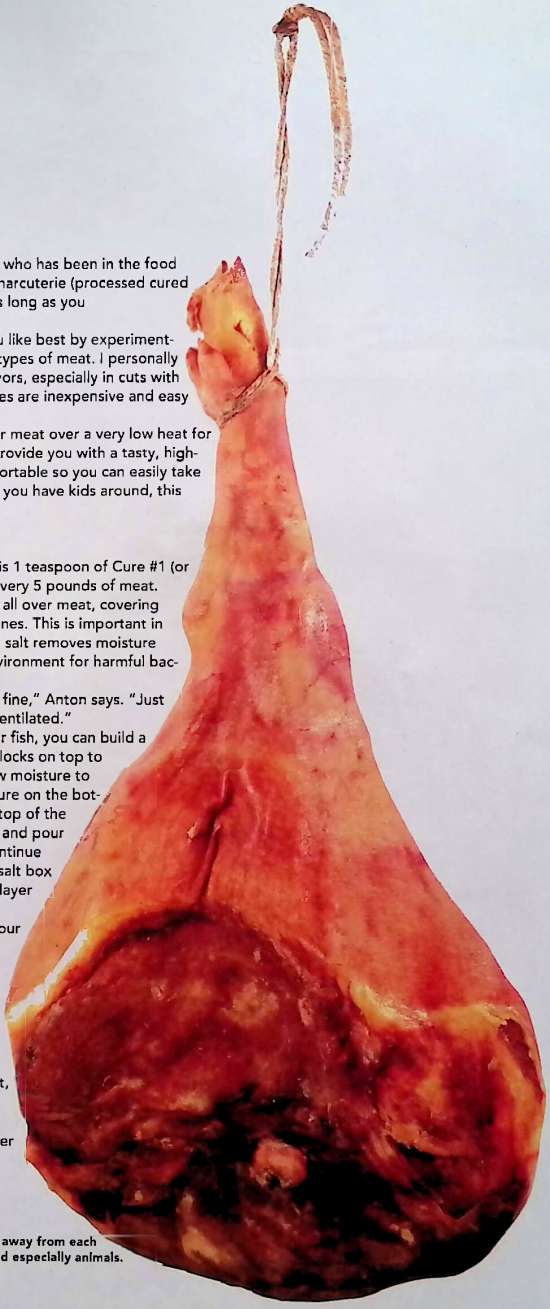
HOW TO

Salt Curing: The basic salt cure recipe is 1 teaspoon of Cure #1 (or Prague Powder) and 1/3 cup of salt for every 5 pounds of meat. Combine the ingredients, then rub them all over meat, covering every inch of meat and all around any bones. This is important in the prevention of foodborne illness—the salt removes moisture from the meat and provides a hostile environment for harmful bacteria. Then, seal in an airtight container.

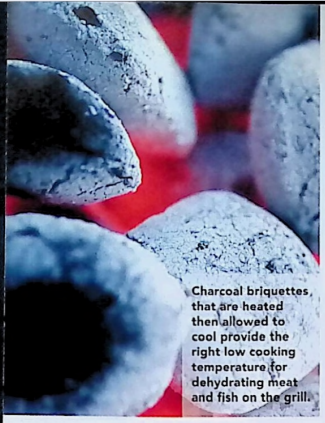
"A cool, dry place outdoors will work fine," Anton says. "Just keep it secure from predators and well ventilated."

If you have a large quantity of meat or fish, you can build a simple wooden salt box. Use stones or blocks on top to keep critters out and underneath to allow moisture to drain from the box. Pour a layer of salt cure on the bottom of the box, lay your meat or fish on top of the salt, keeping space between each piece, and pour salt over the pieces to cover. You can continue this process with as many layers as your salt box allows, but always start and finish with a layer of salt.

When you are ready to eat some of your salted stash, soak the meat or fish overnight in cold water. If it has been in salt for more than three months, Anton recommends changing the water and soaking an additional night. Remove meat from water, rinse, cover again with fresh cold water and simmer over a low flame. Depending on the size of the meat, cooking time can be anywhere from one to six hours. Tasting after one hour will determine if you need to change the water



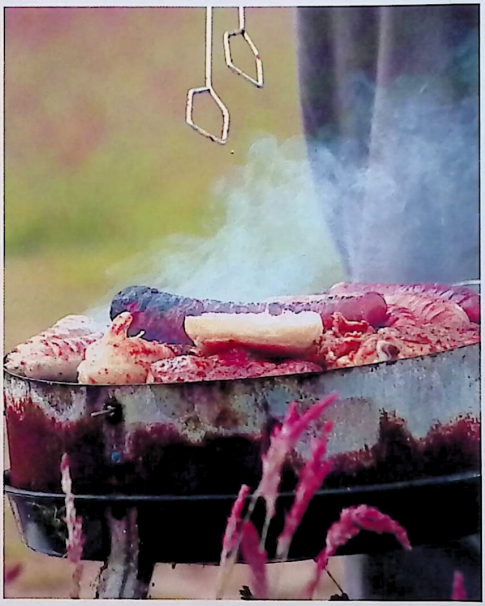
Keep hanging meats away from each other, walls and especially animals.



Charcoal briquettes, that are heated then allowed to cool provide the right low cooking temperature for dehydrating meat and fish on the grill.

Make your own bacon by salt curing a slab of pork belly in an airtight container in the refrigerator. After seven days, remove the slab, rinse and cook on the grill at 200 degrees Fahrenheit for 90 minutes.

Mix up a large batch of rub and store in an airtight container.



By curing your foods yourself, you control the process and the ingredients that you feed yourself and your family.

PHOTOS BY THINKSTOCK

"MAKING YOUR FOODS LAST THROUGH THE YEAR IS ONE OF THE FUNDAMENTAL KEYS TO SURVIVALIST NUTRITION."

due to salt and estimate the cooking time. Fish can take as little as 15 minutes of simmering.

You can use the process of salting to make country ham as well. Rub ham with the salt mixture, adding brown sugar to the cure rub to give your ham that salty sweet goodness. Wrap the ham in cheesecloth or a pillowcase then in a net bag. This will allow the moisture to come out of the ham while keeping the cure in place. Hang it in a cool, dry, well ventilated place. Allow the ham to hang for 90 days. After 90 days, remove the ham from the wrapping and using a knife scrape off any remaining cure. Soak a towel in vinegar and wipe down the ham to clean it. Rub the ham with freshly ground pepper and rehang for up to nine months.

Drying: The first step in dehydrating meat is to slice it into thin strips. This allows for faster drying and, in the end, an easier product to chew. You can skip directly to the drying process, but you might want to marinate your strips overnight to impart additional flavors. Using any combination of Worcestershire sauce, soy sauce, garlic, thyme, rosemary, salt, peppercorns, red chili flakes or other spices will kick up the flavor profile in the end. Add brown sugar or

Dehydrating isn't just for making beef jerky. Venison jerky makes a great snack and fish jerky is a totally different take on trout.

maple syrup to the marinade to switch it up with a sweet element.

"There are no wrong answers; it is all about your taste preferences. If you are using venison, go bold with the flavors; deer can handle it," Anton says. "I like to experiment with a variety of peppercorns and have found the marinades remove the gamey flavor of venison and leave you with a killer piece of lean meat."

The actual drying process requires heat at 150 degrees Fahrenheit. You will need to heat up your coals then allow them to cool slightly. Arrange your meat slices on a metal sheet pan lined with aluminum, then cover the meat with aluminum. Cover the grill and monitor the temperature. If it heats up above 150, open the lid and spread the coals out to cool them down. Thinly sliced meat should be done in three hours.

"[Each strip] should be stiff around the outer edges but pliable in the middle," he adds. "If it breaks when bent, it is overdone."

Once your jerky is done drying, it is ready to eat, or you can store it in an airtight container for months. Make sure to keep it stored in a safe place or you might find it has magically disappeared.

Combo Curing: Once you have salting and drying conquered, why not try your hand at combining those methods with the addition of liquid brine? Brined, salt-cured and dried fish—yes, we are talking fish jerky! Do not use fatty fishes like salmon to make jerky as the fat doesn't break down as well and is a gracious host for bacteria. Trout, Halibut or Herring work much better and the resulting taste and texture are completely different than any other means of cooking.

First, brine your fish in a solution of one part salt and three parts water for 30 minutes. Fill a bucket with the brine solution, making sure the salt is dissolved in the water, add the fish and put a weighted dish over the fish to keep it submerged. Cover the bucket and keep it in a refrigerator or add ice to keep the water cold. Remove the fish from the brine and pat dry with a paper towel. Mix together kosher salt and any spices or herbs you have on hand; try to maintain two parts salt to one part spice. Rub the salt cure on the fish and wrap it tightly in plastic. Refrigerate for six hours or overnight, then remove the fish from its wrapping and scrape off the cure. Using the aforementioned dehydrating method, dry the fish. Check it every hour; it is done when there is no moisture left. Depending on the thickness, drying time can be between two and four hours.

Michele Doele is the General Manager at The Damariscotta Lake Farm Restaurant and Bed and Breakfast in Jefferson, Maine. She is a wife and mother who enjoys everything even vaguely related to food.

TAKE INVENTORY

- Know what meat or fish you have on hand or will have as a result of hunting, fishing or farming.
- Plan your attack by picking your curing method ahead of time.
- Gather your supplies and equipment.
- If you are organized, you can efficiently cure large quantities at once.

SPICE UP YOUR LIFE

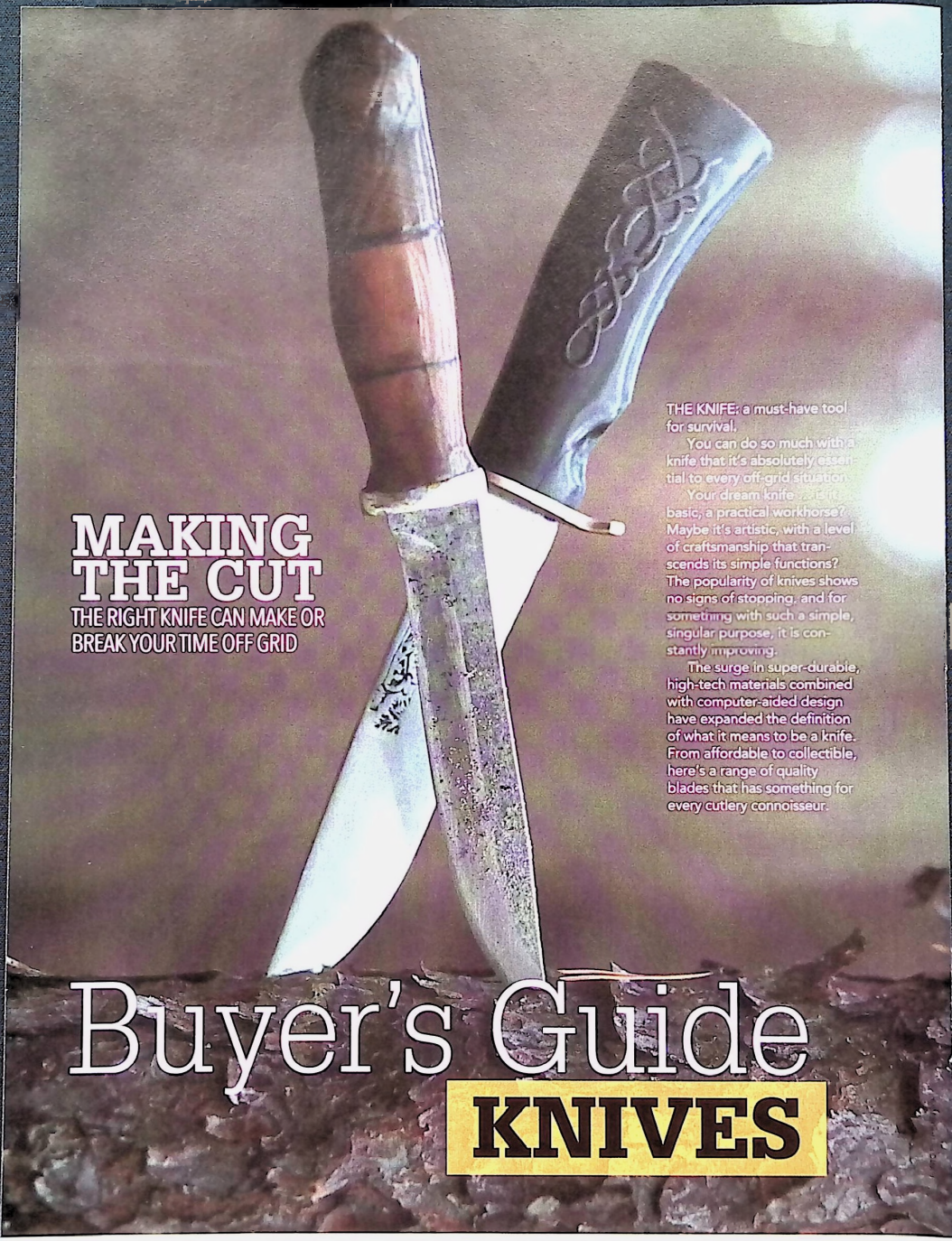
"My go to spice mix for deer jerky is ½ cup honey, ½ cup soy sauce, one clove of garlic (minced), ½ teaspoon freshly ground pepper, ½ teaspoon red chili flakes," Anton says. "You end up with a salty, sweet, spicy combination that is highly addictive."

FOOD SAFETY

- Cured bacon still needs to be cooked thoroughly to kill any bacteria pathogens and prevent foodborne illnesses such as Salmonella, Staphylococcus aureus, Toxoplasmosis gondii, Campylobacter, Yersinia enterocolitica and Listeria monocytogenes.
- Dry cured hams can often be found to have a white mold on them; simply wash it off with hot water, scrub the ham vigorously, then wipe with vinegar.
- Do not save marinades to reuse later. Always discard any unused marinades!

BARTERING

If you end up with an abundance of meats or fish, try bartering with a neighbor or friend. You can supplement your pantry with items you don't make or grow yourself. You can also look into selling your products at a local farmers' market for additional income.



MAKING THE CUT

THE RIGHT KNIFE CAN MAKE OR BREAK YOUR TIME OFF GRID

THE KNIFE: a must-have tool for survival.

You can do so much with a knife that it's absolutely essential to every off-grid situation.

Your dream knife ... is it basic, a practical workhorse? Maybe it's artistic, with a level of craftsmanship that transcends its simple functions? The popularity of knives shows no signs of stopping, and for something with such a simple, singular purpose, it is constantly improving.

The surge in super-durable, high-tech materials combined with computer-aided design have expanded the definition of what it means to be a knife. From affordable to collectible, here's a range of quality blades that has something for every cutlery connoisseur.

Buyer's Guide

KNIVES

"THE MASTERS OF DEFENSE TRADITION OF HIGH-QUALITY KNIVES LIVES ON AT BLACKHAWK!"

1 BLACKHAWK! $193.99

1 BLACKHAWK!

PRODUCT: MOD MARK III AUTOMATIC FOLDER
WEBSITE: www.blackhawk.com
PRICE: $193.99 (online sellers)

Specifications:
- **Overall Length:** 7.88 inches
- **Blade Length:** 3.35 inches (total), 3.15 inches (edge)
- **Blade Material:** N590Co, HRC 58-60
- **Blade Finish:** Black IDROGLIDER finish
- **Edge Type:** Plain or partially serrated
- **Handle:** Textured G-10 scales with stainless steel AISI 420j2 liners
- **Pocket Clip:** Black PTFE-coated multi-position stainless steel
- **Weight:** 0.35 pounds

Description: The BLACKHAWK! MOD Mark III Automatic Folder is based on the award-winning BLACKHAWK! CQD Mark series, a military law enforcement staple. It features automatic side opening and a N590Co stainless steel blade. Available plain or serrated, the 3.35-inch blade is coated in black IDROGLIDER.

Manufacturer's Comment: *"The Masters of Defense tradition of high-quality knives lives on at BLACKHAWK! The MOD knife line taps into a history of excellent quality and combines innovative designs from experts in the field with high production standards."* –CHUCK BUIS, BRAND DIRECTOR

2 BUCK KNIVES

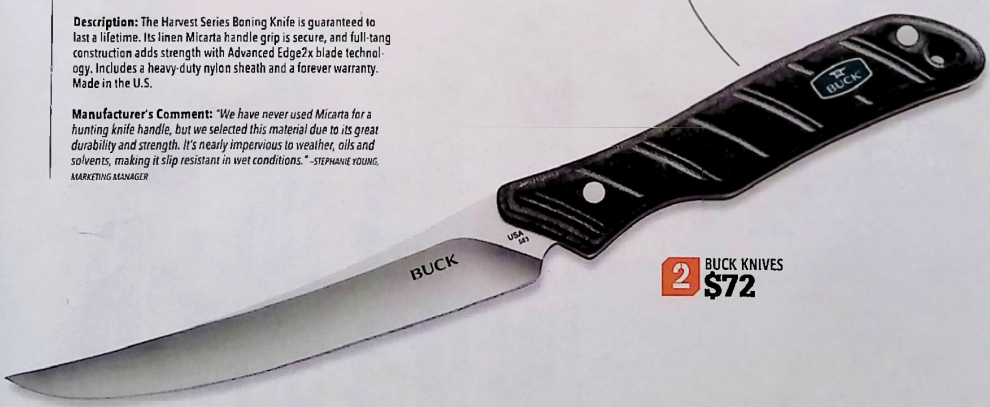
PRODUCT: THE HARVEST SERIES BONING KNIFE
WEBSITE: www.buckknives.com
MSRP: $72

Specifications:
- **Overall Length:** 10 inches, full tang
- **Blade Length:** 5 inches
- **Blade Material:** 420HC
- **Handle Material:** Linen Micarta
- **Weight:** 3.7 ounces

Description: The Harvest Series Boning Knife is guaranteed to last a lifetime. Its linen Micarta handle grip is secure, and full-tang construction adds strength with Advanced Edge2x blade technology. Includes a heavy-duty nylon sheath and a forever warranty. Made in the U.S.

Manufacturer's Comment: *"We have never used Micarta for a hunting knife handle, but we selected this material due to its great durability and strength. It's nearly impervious to weather, oils and solvents, making it slip resistant in wet conditions."* –STEPHANIE YOUNG, MARKETING MANAGER

"IT'S NEARLY IMPERVIOUS TO WEATHER, OILS AND SOLVENTS, MAKING IT SLIP RESISTANT IN WET CONDITIONS."



2 BUCK KNIVES $72

"THE PROPEL AO COMBINES A PREMIUM 420 HIGH-CARBON STEEL BLADE FOR A DEPENDABLE, LONG-LASTING EDGE"

3 GERBER GEAR $126

3 GERBER GEAR

PRODUCT: PROPEL AO
WEBSITE: www.gerbergear.com
MSRP: $126

Specifications:
- **Overall Length:** 8.52 inches
- **Blade Length:** 3.5 inches
- **Blade Steel:** 420HC
- **Blade Finish:** Black
- **Handle:** G-10
- **Weight:** 4.28 ounces

Defining Features: The Propel Assisted Opener (AO) is an all-purpose tactical knife with quick action that is well suited for rugged conditions. Designed with military and law enforcement in mind, this knife is full sized yet easy to handle thanks to its ultra-slim handle, making it perfect for concealed carry.

Manufacturer's Comment: *"Drawing on critical feedback from military and law enforcement personnel, the Propel AO combines a premium 420 high-carbon steel blade for a dependable, long-lasting edge, G-10 composite handles for incredible durability and Gerber's assisted opening 2.0 technology for seamless one-handed deployment."* –MIKE MAY, BACKBONE MEDIA

"THE HERITAGE COLLECTION FEATURES A SPECIAL TANG STAMP, BLADE ETCH, INLAID SHIELD, AND IS PACKAGED IN A SPECIAL TIN BOX."

4 BEAR & SON CUTLERY $135-$225

4 BEAR & SON CUTLERY

PRODUCT: BEAR OPS BUTTERFLY KNIVES
WEBSITE: www.bearandsoncutlery.com
MSRP: $135 - $225

Specifications:
- **Blade:** Bear Song IV Pattern 400 models: 3 3/8-inch edged satin-finish Bowie clip blade, 14C28N stainless steel
- **Handle:** 5 3/8-inch T-6 aircraft aluminum, with water-transfer coating of Blue Drop, Pink Drop, Carbon Fiber and the Reaper Z coating.
- Bronze phosphorous washers
- Made in the U.S.
- Lifetime limited warranty

Description: Bear OPS has added eight new models to its growing family of butterflies. The four Bear Song IV Pattern 400 models have a 3 3/8-inch edged satin-finish blade that folds into a 5 3/8-inch handle. The four Pattern 450 models have the same features and coating choices with a 2 7/8-inch blade in a 4 ¼-inch handle. They are heat treated to a Rockwell hardness of 58-60. For smooth opening and closing, all Bear OPS butterfly blades ride on bronze phosphorous washers.

Manufacturer's Comment: *"My grandfather would be proud of the American-made quality with which these knives are made. These knives feature genuine bone and Abalone handles, most have long nail pull marks and highly polished 440 stainless steel blades. The Heritage Collection features a special tang stamp, blade etch, inlaid shield, and is packaged in a special tin box. More than 91 hand steps by a staff of skilled craftsman will assure quality matching those knives that were favorites of my grandfather so long ago."* –KEN GRIFFEY, PRESIDENT

5 SPYDERCO

PRODUCT: KARAHAWK
WEBSITE: www.spyderco.com
MSRP: $289.95

Specifications:
- **Overall Length:** 6.5 inches
- **Blade Length:** 2.35 inches
- **Blade Steel:** VG-10
- **Length Closed:** 4.5 inches
- **Cutting Edge:** 2.05 inches
- **Weight:** 3.8 ounces
- **Blade Thickness:** 0.098 inch
- **Handle Material:** G-10

Description: The Karahawk is Spyderco's folding version of the Southeast Asian karambit. This uniquely shaped knife has a highly durable hawkbill blade precision machined from the strongest steel: VG-10 stainless steel. The Emerson opening feature allows for easy deployment. It is lightweight and easy to carry and features a sturdy grip for precise cutting.

Manufacturer's Comment: *"Designed by the founder of the company, Sal Glesser, it is his take on a modern karambit."* –MICHAEL JANICH, SPECIAL PRODUCTS COORDINATOR

6 JANTZ SUPPLY

PRODUCT: PARACORD and BEADS
WEBSITE: www.knifemaking.com
MSRP: $4 - $60

Specifications:
- A wide selection of D.I.Y. knife crafting and repair parts

Defining Features: Jantz Supply Paracord 550LB is the perfect braided cord for wrapping knife handles. The inner core can be removed for a flattened appearance. Thin, strong and lightweight, you will want to keep a supply of this cord to create lanyards, thong cords, bracelets, laces and numerous other craft projects. With 40 colors available, it's great for scout projects. Choose from kits or create your own by purchasing your favorite Paracord color and the components separately.

Manufacturer's Comment: *"Our goal is to promote the art of knife-making, offering the best quality products combined with unsurpassed customer service."* –SHANNA KEMP, NEW PRODUCT RESEARCH

5 SPYDERCO $289.95

"DESIGNED BY THE FOUNDER OF THE COMPANY, SAL GLESSER, IT IS HIS TAKE ON A MODERN KARAMBIT."

"OUR GOAL IS TO PROMOTE THE ART OF KNIFE-MAKING, OFFERING THE BEST QUALITY PRODUCTS COMBINED WITH UNSURPASSED CUSTOMER SERVICE."

6 JANTZ SUPPLY $4-60

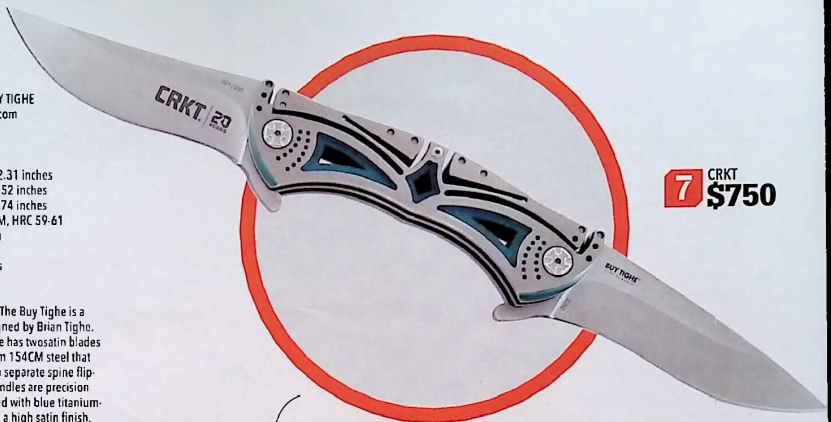
7 CRKT

PRODUCT: BUY TIGHE
WEBSITE: www.crkt.com
MSRP: $750

Specifications:
- **Overall Length:** 12.31 inches
- **Blade 1 Length:** 3.52 inches
- **Blade 2 Length:** 3.74 inches
- **Blade Steel:** 154CM, HRC 59-61
- **Blade Finish:** Satin
- **Handle:** Titanium
- **Weight:** 6.3 ounces
- **Lock:** Klecker

Defining Features: The Buy Tighe is a collector's knife designed by Brian Tighe. This dual-bladed knife has twosatin blades ground from premium 154CM steel that deploy smoothly with separate spine flippers. The titanium handles are precision machined, then coated with blue titanium-nitride and ground to a high satin finish, resulting in a two-toned handle. The lock is integrated into the spine of the handle. Ornamental flourishes adorn the pivot screws. The Buy Tighe is CRKT's 20th anniversary commemoration knife.

Manufacturer's Comment: *"Brian Tighe really brought it with this design. The Buy Tighe won the award for most innovative custom knife at the Blade Show."* –JOEL BORNZIN, DIGITAL MARKETING COORDINATOR



7 CRKT $750

"THE BUY TIGHE WON THE AWARD FOR MOST INNOVATIVE CUSTOM KNIFE AT THE BLADE SHOW."

8 KA-BAR

PRODUCT: 1217EWS
WEBSITE: www.kabar.com
MSRP: $1,000

Specifications:
- **Overall Length:** 12.25 inches
- **Blade Length:** 7 inches
- **Blade Steel:** 1095 Cro-Van, HRC 56-58
- **Blade Finish:** Black
- **Handle:** Aluminum
- **Weight:** 0.9 pound

Defining Features: The legendary story of Eugene Stone's knife lives on with this KA-BAR replica. Using his father's original casts, Bill Stone finished each of these knives before sending the blades in for bluing. It comes with a JRE semi-custom leather sheath and Gerstner golden oak case accented with nickel corners, hinges and a draw latch. Also includes a certificate of authenticity and a DVD of Bill Stone telling his father's story. Made in the U.S. Limit five per customer.

Manufacturer's Comment: *"There's only going to be 250 made–an instant collector's item."* –PAUL TSUJIMOTO, SENIOR ENGINEER

"THERE'S ONLY GOING TO BE 250 MADE–AN INSTANT COLLECTOR'S ITEM."

8 KA-BAR $1,000

CASE XX

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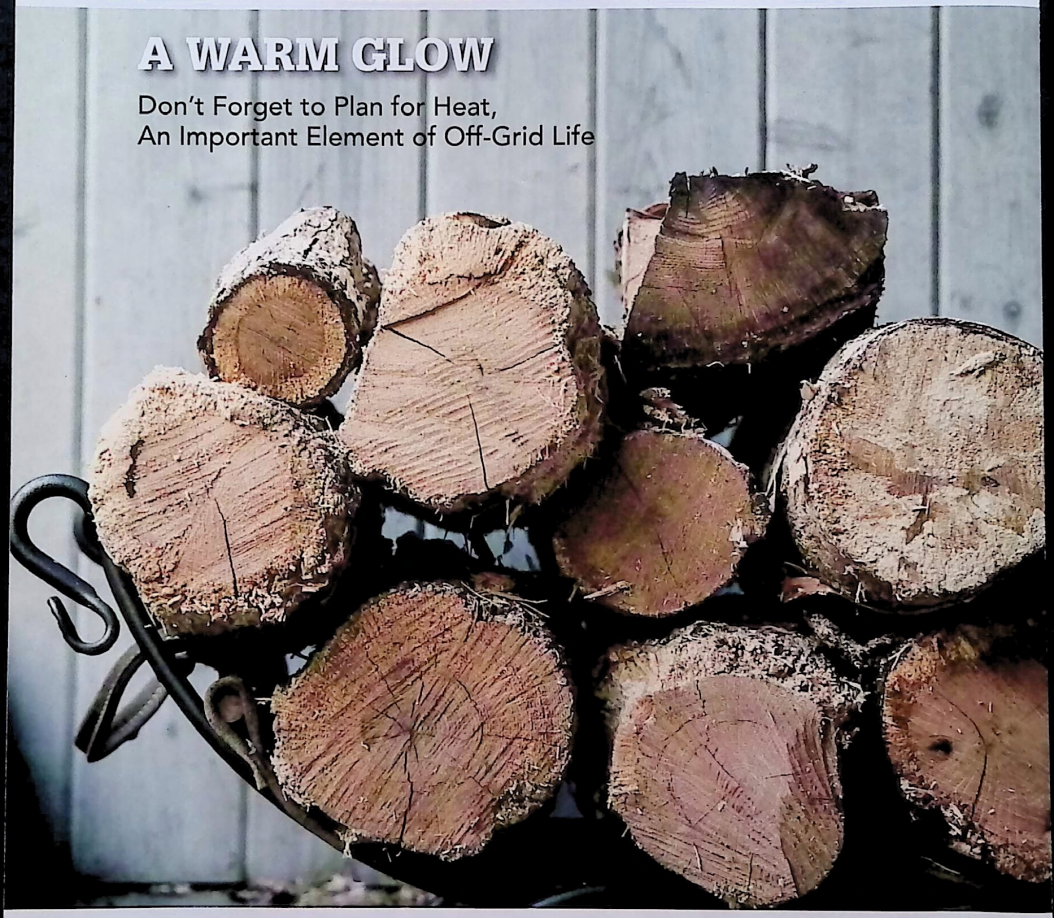
HEAT & POWER

IN THIS SECTION HEATING SOLUTIONS + RECHARGING OFF GRID + FLASHLIGHT GUIDE

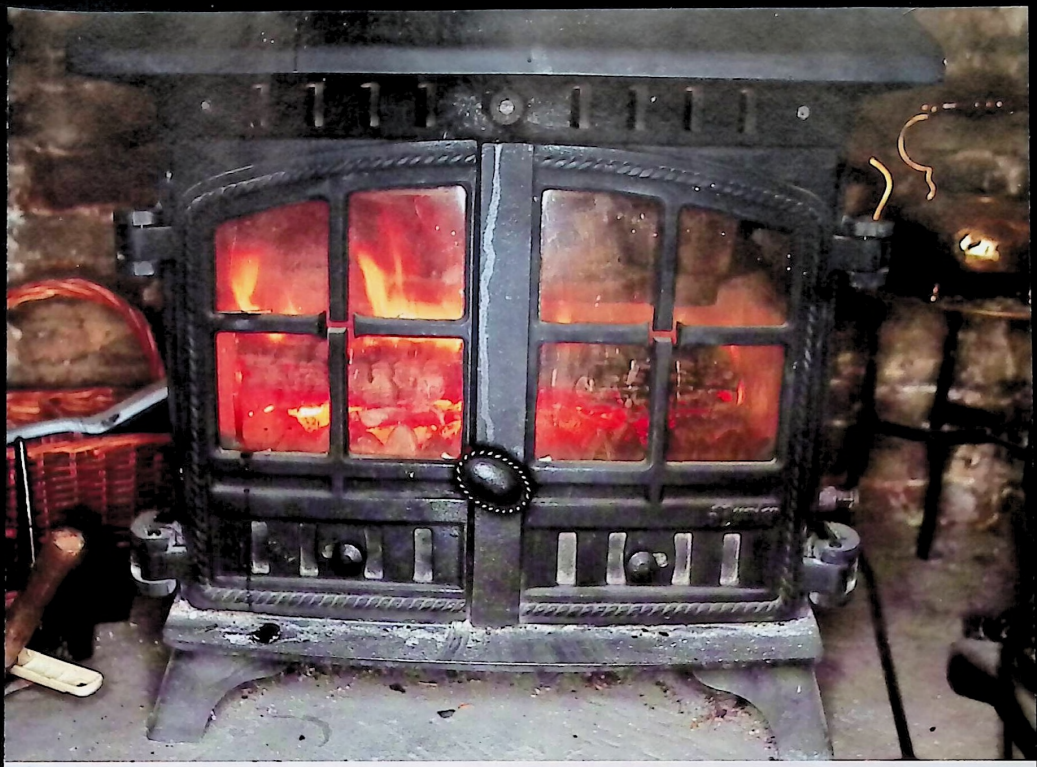


A WARM GLOW

Don't Forget to Plan for Heat, An Important Element of Off-Grid Life

WHETHER YOU'RE JUST STARTING OUT LIVING OFF THE GRID or you're the most seasoned homesteader in your state, chances are high that you get stressed when the weather starts to turn cool. Not only does winter mean that you should have already canned and preserved your summer and fall harvests, it also means that the cold weather threatens your family's comfort—and safety.

Failing to properly heat your home in the wintertime can be extremely dangerous, and it's not something to take lightly. Now is the time to ensure that you're well prepared for the avenue you'll be taking to heat your home this winter. Turn the pages for some realistic guidance that can help you keep your family warm and toasty, even as the snow falls outside of your door.



THE HEAT IS ON

5 GREAT OPTIONS TO WARM YOUR OFF-GRID HOME

By TRACY BREEN

ONE OF THE GREATEST WAYS to lower your dependence on the grid is to use an alternative heat source, like wood, to heat your home.

There's something that can't be beat about throwing another log on the fire and realizing that you don't have a natural gas or propane bill to pay. In the last 20 years, there have been more advancements in wood-heating options than ever before. Not long ago, your only alternative heating option was a simple wood stove. Today, a simple wood stove is still a great way to go, but there are other choices.

NOTHING IS FREE

If you want to use wood as a heat source, realize that it isn't free. Remember that time is worth something. Finding, cutting, splitting and stacking firewood takes a lot of time, so when you decide what kind of wood stove to get, make sure you go with the most efficient type to cut down on wood-related labor.

1 THE BASIC WOOD STOVE

A small box stove that requires a minimum amount of wood each day will heat a small house (800 to 1,000 square feet), but obviously, a larger house will require a larger stove.

The advantage of a small wood stove is that it's simple to install, fairly inexpensive and doesn't require much maintenance. My favorite kind of wood stove is a soapstone model; my wife's grandfather had one in his log home and it worked great. These stoves give off an even heat, and the soapstone never gets as

PHOTO BY HINSDALE

QUICK WOOD TIPS

- Freshly cut wood contains up to 50-percent moisture and must be seasoned to 20- to 25-percent moisture content before burning.
- Wet wood is easier to split than dry wood.
- Split wood into pieces and stack out of the rain for at least six months to season properly.
- Well seasoned firewood generally has darkened ends with visible cracks or splits. It is relatively lightweight and makes a sharp, distinctive "clink" when two pieces strike each other.
- Limit the amount of pine you burn; it's a resinous softwood.

PHOTO BY THINKSTOCK

hot as cast iron, so you don't have to worry as much about getting burned.

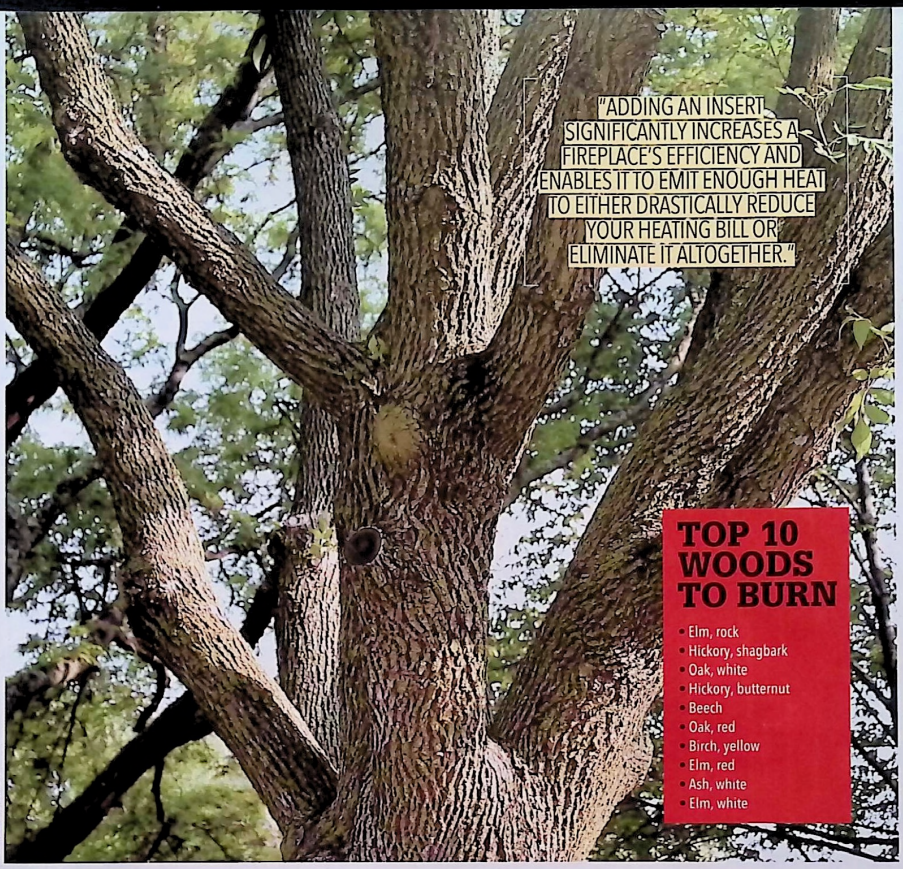
2 MASONRY STOVE

Another heating option that works well is the masonry stove. In fact, a masonry stove is probably one of the most efficient ways to heat a home. A masonry stove is a firebox surrounded by a lot of masonry. As the fire burns, it heats up the masonry. It takes a long time for a masonry stove to heat up, but once it does, it gives off heat for hours. In fact, most people who have this style of woodstove will tell you they only have to have one or two small fires a day. After the fire goes out, the masonry radiates warm heat into the house. In many cases, a masonry stove looks like a fireplace. The downside of this type of stove is they are incredibly complicated to build and experts often charge $10,000 or more to build one. There are several books available that teach you how to build one yourself, but before you tackle a project like this, you better have a good understanding of masonry work and some serious construction experience.

3 ROCKET STOVE

For those who are handy, you may want to consider building a rocket stove mass heater. A rocket stove is basically a masonry stove on steroids; the difference is many people who build this type of stove report that they did it for only a few hundred dollars.

A rocket mass stove requires wood being fed into a J-shaped combustion chamber. The hot fire heats up a secondary, large firebrick or metal material that is heavily insulated. Exhaust/heat then heats up a large cob or masonry-like material. Once that is fully heated, it stays warm and gives off heat for hours. Many people who build one of these actually build



"ADDING AN INSERT SIGNIFICANTLY INCREASES A FIREPLACE'S EFFICIENCY AND ENABLES IT TO EMIT ENOUGH HEAT TO EITHER DRASTICALLY REDUCE YOUR HEATING BILL OR ELIMINATE IT ALTOGETHER."

TOP 10 WOODS TO BURN

- Elm, rock
- Hickory, shagbark
- Oak, white
- Hickory, butternut
- Beech
- Oak, red
- Birch, yellow
- Elm, red
- Ash, white
- Elm, white

PHOTO BY THINKSTOCK

a large cob bed or couch that gives off a ton of warmth when the exhaust heat gets it up to temperature. Rocket mass stoves have a reputation for being 90-percent efficient, and they require very little firewood to keep going. In fact, many people report that they use small twigs and limbs left over from trees in their rocket stoves.

If you aren't afraid to tackle a large project, this is a great option. Many people use a metal drum for the chamber, and making the cob material is fairly inexpensive.

4 THE WOOD BOILER

If you plan on staying on the grid and have enough solar, wind or generator power to create a fair amount of electricity, one of the most convenient ways to heat a house is with a wood boiler. I have a wood boiler, and although it does burn a lot of wood, it works great. I heat my house, two garages and a swimming pool with my wood boiler, and I even have radiant floor heat, which is extremely warm and cozy during the long winter months.

One of the greatest advantages of a wood boiler is you can keep it outside and away from your house. As a result, all of the mess created by the wood and smoke stays outside. The greatest disadvantage of this style of stove is the hot water gets piped in and out of the house. Obviously you will lose some of the heat as it is moving back and forth from the house, so this system is far from the most efficient one.

Those who want a wood boiler and a more efficient system should check out boilers that can be placed in the house. These systems require less piping. Most outside boilers are 50 yards or more from the house, requiring a lot of work and sometimes money to dig an outdoor trench for them. In addition, you have to go outside to fill the wood boiler, which can also be labor intensive; keeping one inside the

"THERE'S SOMETHING THAT CAN'T BE BEAT ABOUT THROWING ANOTHER LOG ON THE FIRE AND REALIZING THAT YOU DON'T HAVE A NATURAL GAS OR PROPANE BILL TO PAY."

PHOTO BY THINKSTOCK

house doesn't require nearly as much work or effort to keep it filled.

5 THE FIREPLACE BOILER

If your house already has a fireplace, the easiest way to heat it is to add a fireplace insert. Most of the time, a fireplace is incredibly inefficient; all the heat goes up the chimney.

Adding an insert significantly increases a fireplace's efficiency and enables it to emit enough heat to either drastically reduce your heating bill or eliminate it altogether.

My brother-in-law heated his entire house with a fireplace insert. Finding an inexpensive, used insert is usually fairly easy, too.

AND THE WINNER IS ...

There are many different wood-burning options on the market. The one you go with will depend on how much money, time and skill you have. A wood boiler or a wood-stove insert is the only thing I will ever have. For some, a rocket mass stove is a great option. Whichever option you decide upon, make sure it is the one that best fits your lifestyle and your needs.

Using wood as a heat source can be a very rewarding experience, and it gives you a wonderful freedom that others tied to the utility company simply don't have.

PROS AND CONS

Wood Stove
Pros: Simple to install, gives off even heat, not much maintenance
Cons: Can get expensive depending on how much wood you burn

Masonry Stove
Pros: Super efficient, doesn't use too much wood
Cons: Very expensive to build

Rocket Stove
Pros: Efficient, inexpensive to build and run
Cons: Big project that requires know-how

Wood Boiler
Pros: Convenient, can be located outside the home
Cons: Burns a lot of wood, hot water gets piped in and out of the house

Fireplace Insert
Pros: Incredibly efficient, works with existing fireplace
Cons: Can't use it unless you already have a fireplace

FACT

One cord of wood burned as firewood provides the heat equivalent to that produced by burning 200 to 250 gallons of heating oil depending on the type of hardwood you are using.

SOURCE: [illegible]

JANTZ

JANTZ CUSTOM QUALITY BLADES ARE 100% MADE IN THE USA. FLAT GROUND FROM THE BEST USA MADE STEELS AVAILABLE AND CRYOGENTICALLY HEAT TREATED YOU WILL NOT FIND A BETTER PRODUCT OR VALUE.

Pattern 39 Blades

Overall length 6 1/2"
Blade Length 2 1/2"
Blade Width 1 1/8"
Blade Thickness 1/8"
Handle Holes 3/16"
Thong Hole 3/16"

CAT.#	STEEL	FINISH	PRICE
J3998	1095	Satin	24.95
J399K	1095	Black Teflon	24.95
J3907	440C	Peened	29.95
J3908	440C	Satin	29.95
J3927	D2 Steel	Peened	29.95
J3928	D2 Steel	Satin	29.95
J3989	Damascus	Etched	64.95

Handles for Pattern 39

Contoured and textured handles. Cut slightly oversized for proper fitting. More handle options are offered. See them online at www.knifemaking.com.

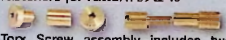
Handles Smooth No Texture

CAT.#	COLOR	MATERIAL	PRICE
D3949	B.I./Cocobolo	Dymondwood	15.95
D3951	B.I./Walnut	Dymondwood	15.95
G3919	Black	G10	16.95
G3929	Red	G10	16.95

Handles Basket Weave Texture

CAT.#	COLOR	MATERIAL	PRICE
G3911	Black	G10	20.95
G3931	Orange	G10	20.95
G3981	Pink	G10	20.95

Fasteners for Pattern 39 & 40



Torx Screw assembly includes two 3/16" brass bushings and four T6 torx screws. For use with the G10 textured handles. - 1/4" Corby rivets for use with Dymondwood handles for flush surface. Includes two rivets.

CAT.#	TYPE	ALLOY	PRICE
B051	Torx	Brass	3.95
A061	Torx	Stainless	4.95
B760	Corby	Brass	2.90
A724	Corby	Stainless	3.70

Pattern 40 Blades

Overall length 7 3/16"
Blade Length 3 1/4"
Blade Width 1 1/16"
Blade Thickness 1/8"
Handle Holes 3/16"
Thong Hole 3/16"

CAT.#	STEEL	FINISH	PRICE
J4098	1095	Satin	24.95
J409K	1095	Black Teflon	24.95
J4007	440C	Peened	32.95
J4008	440C	Satin	32.95
J4027	D2 Steel	Peened	32.95
J4028	D2 Steel	Satin	32.95
J4089	Damascus	Etched	74.95

Handles for Pattern 40

Contoured and textured handles. Cut slightly oversized for proper fitting. More handle options are offered. See them online at www.knifemaking.com.

Handles Smooth No Texture

CAT.#	COLOR	MATERIAL	PRICE
D4049	B.I./Cocobolo	Dymondwood	15.95
D4051	B.I./Walnut	Dymondwood	15.95
D4079	Forest Camo	Dymondwood	15.95
G4019	Black	G10	16.95
G4029	Red	G10	16.95

Handles Pyramid Texture

CAT.#	COLOR	MATERIAL	PRICE
G4024	Red	G10	20.95
G4044	Blue	G10	20.95
G4054	Olive Drab	G10	20.95
G4084	Pink	G10	20.95

MADE IN USA

PARACORD 100 FOOT BUNDLE $6.99

Genuine 550 lb. Type III, 1/8" diameter nylon Paracord with a 7 strand core.

The perfect braided cord for wrapping knife handles. The inner core can be removed for a flattened appearance. Thin, extremely strong and lightweight you will want to keep a supply of this cord to create lanyards, thong cords, bracelets, laces and other projects. This paracord can blend or add contrast to any project. 40 colors available.

CAT.#	COLOR	PRICE	CAT.#	COLOR	PRICE
PC101	White	6.99	PC118	Neon Orange	6.99
PC102	Black	6.99	PC119	Neon Green	6.99
PC103	Olive Drab	6.99	PC120	Neon Pink	6.99
PC104	Coyote Brown	6.99	PC121	Purple	6.99
PC106	Charcoal	6.99	PC125	Imperial Red	6.99
PC108	Burgundy	6.99	PC126	Woodland	6.99
PC109	Midnight	6.99	PC127	Desert Camo	6.99
PC113	Dark Green	6.99	PC128	Foliage Camo	6.99
PC115	Dark Brown	6.99	PC129	Pink Camo	6.99
PC116	Colonial Blue	6.99	PC140	G.I. Camo	6.99

Pattern 41 Blades

Overall Length: 7 5/8"
Blade Length: 3"
Width: 1"
Thickness: 1/8"

CAT.#	STEEL	FINISH	PRICE
J4198	1095	Satin	24.95
J419K	1095	Black Teflon	24.95
J4127	D2 Steel	Peened	32.95
J4128	D2 Steel	Satin	32.95
J4137	CPMS 30V	Peened	42.95
J4138	CPMS 30V	Satin	42.95
J4189	Damascus	Etched	79.95

Pattern 42 Blades

Overall Length: 6 5/8"
Blade Length: 2 5/8"
Width: 7/8"
Thickness: 1/8"

CAT.#	STEEL	FINISH	PRICE
J4298	1095	Satin	24.95
J429K	1095	Black Teflon	24.95
J4227	D2 Steel	Peened	32.95
J4228	D2 Steel	Satin	32.95
J4207	440C	Peened	32.95
J4208	440C	Satin	32.95
J4257	CPM154	Peened	39.95
J4258	CPM154	Satin	39.95
J4289	Damascus	Etched	69.95

CAT.#	SHEATH	PRICE
KT410	Kydex	12.95
KT455	Kydex Belt Clip	9.95

CAT.#	SHEATH	PRICE
KT420	Kydex	12.95

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knifemaking.com

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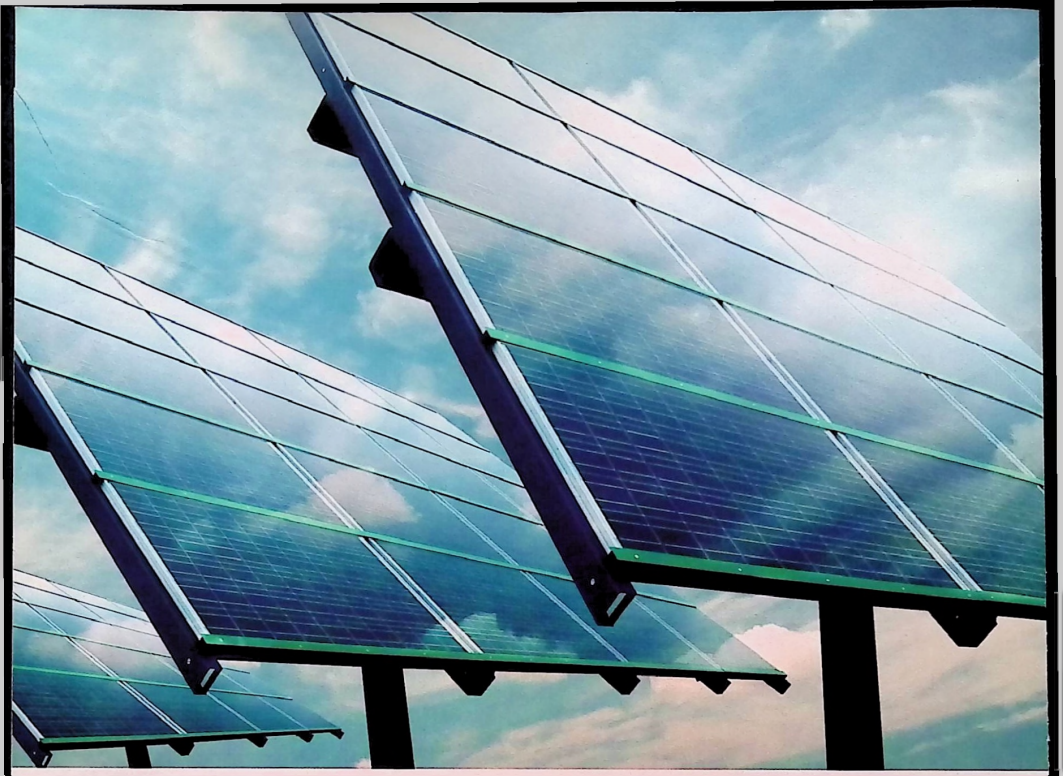


CHARGE IT!

CHOOSING THE BEST SOLAR POWER TO GIVE LIFE TO YOUR GADGETS

By TRACY BREEN

WHETHER YOU DECIDE to go on a backcountry trip or you are living off the grid, having a portable solar charger to charge all your small electronic devices can be a lifesaver. There's no telling when you'll need to recharge gadgets that could provide valuable communications or just make you feel more at home!

IN THE KNOW

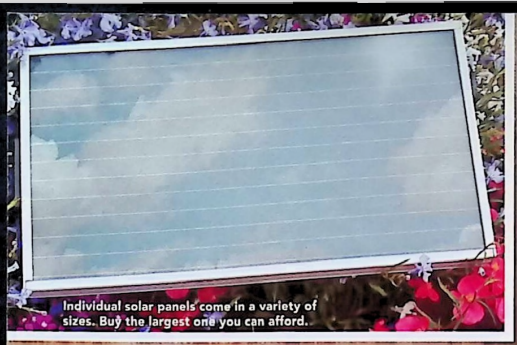
When you purchase a solar charger, you must know a few things about the device you intend to charge, the panel and battery pack. According to Michigan-based electronics engineer Randy Herlein, buying a unit that puts out more than enough power is a necessity.

"A charger must have enough output to equal the input requirements of whatever is being charged," Herlein says. "In addition, everything is not equal when transferring energy from one unit to another. Some energy is lost. For instance, a smartphone has the internal battery capacity of about 1,000 mAh (milli-Amp hours). A power pack that is rated to 2,000 mAh will provide plenty of juice to

Windmills can also be used to create electricity but aren't always as reliable as solar panels.

"FOR OPTIMUM PERFORMANCE, A SOLAR PANEL NEEDS DIRECT SUNLIGHT AND LOTS OF IT."

recharge a smartphone once but not twice. It will have some juice left after it has been charged to partially charge the phone again. If you're going into the backcountry for a few days, I would suggest having a battery pack that is rated at 2,000 mAh as a minimum. Most cell phones will need this large of capacity to get charged. A smartphone has a voltage input rating of 5 volts.



Individual solar panels come in a variety of sizes. Buy the largest one you can afford.

Utilizing propane for large appliances is often a must when living off the grid.

AUTHOR'S CHOICE

I use a Goal Zero Guide 10 Plus Solar Kit and it works great for keeping all of my devices charged and ready to work. Like many of the kits on the market, it comes with a small solar panel that collects the sun. This panel charges up a rechargeable battery pack. When I need to recharge a device, I just plug it into the battery pack to get re-juiced. Check out www.goalzero.com for more details.

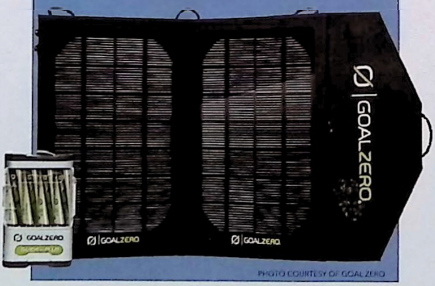


PHOTO COURTESY OF GOAL ZERO

When you pick out a unit, make sure that a battery pack can handle a smartphone."

Herlein lost a leg to cancer a few years ago, and when he's in the backcountry, he sometimes needs to charge up some of the components in his prosthetic leg. He went the extra mile and built his own power pack.

"My leg has a 1,800 mAh battery, so I needed a 3,600 mAh minimum," Herlein says. "I typically get 1.5 recharges out of my battery pack. I take two in my pack with full charges so I always have a backup. One is always charged and one is being used or was ready to use."

PANEL SAVVY

If you're going to rely on a solar charger all the time, you should buy as large of a portable panel as you can afford. A large panel is more expensive, heavier and harder to pack, but it will charge your battery pack in no time. For example, small panels can take six to 10 hours to charge a small battery pack, whereas a medium-sized panel may only take four hours or so to charge a pack. My Nomad 7 panel charges up my Guide 10 Plus in three to six hours. When I'm in intense sunlight, it typically takes about three hours.

To ensure your panel is always charging, keep it in the sun all day when you're hiking.

"For optimum performance, a solar panel needs direct sunlight and lots of it," Herlein explains. "One of the best ways to achieve this while in the backcountry is by keeping the panel open and on your backpack when hiking during

"I USE A GOAL ZERO GUIDE 10 PLUS SOLAR KIT AND IT WORKS GREAT FOR KEEPING ALL OF MY DEVICES CHARGED AND READY TO WORK."

Having a backup generator gives the homeowner flexibility in case the solar panels aren't creating enough electricity.

the day. By the time the dinner hour rolls around, the battery pack should be charged and ready to work."

HOW LONG?

You may be wondering how long it will take to charge your cell phone or other device from the battery pack once it's charged up. The answer is simple: It takes about the same amount of time as it does when it is plugged into an outlet at home. The only difference is if the battery pack isn't completely charged, it might not charge the device all the way.

Remember, when using a solar panel and battery pack, the battery pack typically contains rechargeable AA batteries that you can remove and use independently in a device that uses AA batteries.

CHOICES

When you choose a solar panel or a kit, realize that the larger the panel, the more sunlight it collects. The more sunlight it collects, the quicker it charges the battery pack. There is a fine line between having just enough panel and having too large of a panel that is heavy and hard to pack. I suggest going for a small rollup panel or a panel that folds up when not in use.

Whatever you choose to do, realize that by purchasing a small solar panel and battery, you will be able to bring a few of your favorite modern-day conveniences with you off the beaten path. And that is well worth the investment.

QUICK TIPS

- Buy batteries that are twice the size of what you want to recharge.
- Buy Lithium ion batteries.
- Buy Monocrystalline-based solar panels.
- Decide which gadgets must go on the trip and ditch the rest; every ounce of gear adds up.
- Heat and batteries are enemies when charging up the unit or storing it in your pack.
- Make sure to buy a kit that says the batteries can be charged hundreds of times to ensure it will last years, not months.

CONTACT INFO

Some great resources for solar products:

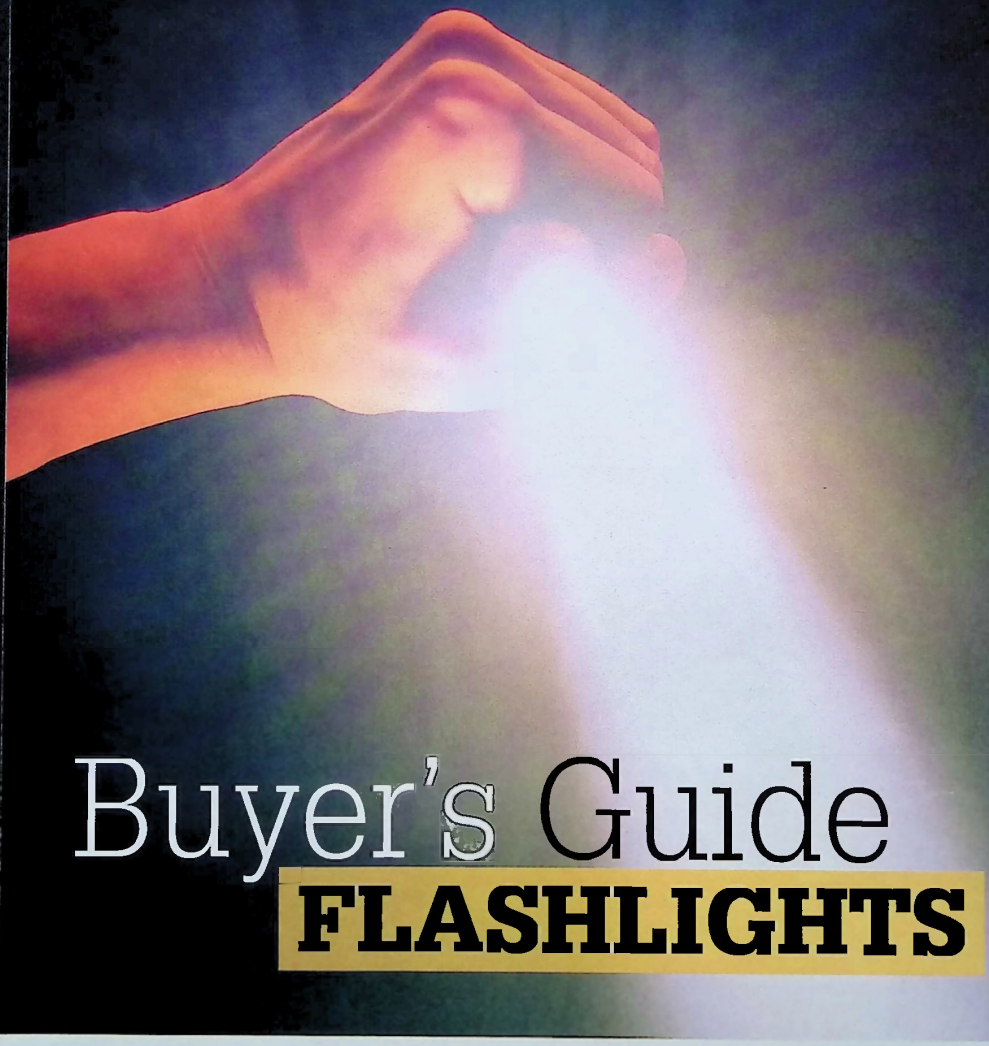
- Solarmonkey Adventurer (www.powertraveller.com)
- R21 Rollable Solar Charger (www.powerfilmsolar.com)
- PowerSync Solar Wrap (www bushnell.com)
- SR10 Suncase (www.sunreadypower.com)
- Fuse 4W Solar Charger (www.voltaicsystems.com)
- SPG-3000 (www.arcsolarsystems.com)

FLASH FORWARD

MAKE LIFE OFF THE GRID EASIER WITH A GOOD FLASHLIGHT

GOING OFF GRID is often a very dark proposition. But having a great flashlight can certainly shed some light on some hairy or not-so-hairy situations.

As everyone should know by now, your grandfather's flashlights have gone the way of the horse-drawn carriage and the whalebone corset. The invention of the LED (light emitting diode) changed the world of illumination. Magical and even painful amounts of pupil-popping power are now available to all. Not long ago, 100 lumens was considered a lot. Now, almost 10 times that is standard and many people go for more. The satisfaction of using quality light is like getting new glasses. So improve your sight with a new flashlight!



Buyer's Guide FLASHLIGHTS

PHOTO BY THINKSTOCK

"THE 7060 REINVENTS THE FLASHLIGHT WITH A NUMBER OF TECHNICAL BREAKTHROUGHS."

1 PELICAN PRODUCTS

PRODUCT: 7060 LED LAPD
WEBSITE: www.pelicanproducts.us
MSRP: $133.77

Specifications:
- **Light Source:** LED
- **Light Output:** 164 lumens (high), 36 lumens (low)
- **Runtime:** 2 hours, 15 minutes (high); 15 hours (low)
- **Beam Distance:** 243 meters (high), 113 meters (low)
- **Batteries:** One 3.7V 2200mAh lithium-ion
- **Length:** 8.65 inches
- **Weight:** 10.4 ounces
- **Colors:** Black
- **Charge Time:** 4 to 5 hours

Defining Features: The Pelican 7060 LED light's dual-switch technology allows light activation with a tail-mounted switch or a body-mounted switch, allowing a grip from several positions. Rechargeable lithium-ion batteries provide maximum brightness and a lightweight carry. Accessories include one battery back, one 110-volt transformer and one charger.

Manufacturer's Comment: *"The 7060 reinvents the flashlight with a number of technical breakthroughs. Suitable for the best patrol and tactical applications."*
—KEITH SVENSON, SENIOR MARKETING AND MEDIA RELATIONS SPECIALIST

2 STREAMLIGHT

PRODUCT: STINGER LED HL
WEBSITE: www.streamlight.com
PRICE: $100 - $139 (online resellers)

Specifications:
- **Light Source:** C4 LED technology, shock-proof, 50,000-hour lifetime
- **Output:** 640 lumens/340 lumens/170 lumens
- **Runtime:** High for a super-bright beam, 1.25 hours/ 297 meters; medium for bright light, 2 hours/210 meters; low for light without glare, 4 hours/148 meters; strobe for disorienting or signaling your location, 3 hours
- **Batteries:** Three-cell, 3.6V Ni-MH sub-C battery, rechargeable up to 1,000 times
- **Length:** 8.41 inches
- **Weight:** 12.4 ounces
- **Charge Time:** 10-hour steady charge, 2.5-hour fast charge or PiggyBack charger

Defining Features: Delivering maximum illumination with a wide beam is what the Stinger LED HL rechargeable is all about. This high-lumen flashlight delivers 640 lumens over 297 meters. The multi-function on/off push-button switch lets you choose three lighting modes and strobe, and the deep-dish parabolic reflector produces optimum peripheral illumination. The body is machined aircraft aluminum with a non-slip rubberized comfort grip (anti-roll rubber ring included).

Manufacturer's Comment: *"Designed to be worn on an officer's belt. It only runs on the nickel metal hydride battery—NiCad has heavy toxic metals, nickel metal hydride does not. Charges in 2.5 hours."*
—JEFF ORR, REGIONAL SALES MANAGER

"DESIGNED TO BE WORN ON AN OFFICER'S BELT."

3 BARSKA

PRODUCT: 1,200 LUMEN FLX FLASHLIGHT (BA11630)
WEBSITE: www.barska.com
MSRP: $271.50

Specifications:
- **Light Source:** HD LED 5, 12 watt
- **Output:** 1,200 lumens
- **Runtime:** 45 minutes high output; three hours low output
- **Batteries:** Two 18650 lithium batteries and charger included
- **Length:** 8.5 inches
- **Weight:** 14.4 ounces
- **Colors:** Black matte
- **Included Accessories:** Lithium battery charger

Defining Features: The beam of intense white light that shines from the new Barska 1,200 Lumen FLX Flashlight goes on for miles. It comes with rechargeable batteries and charger. The 12-watt output lasts for hours on a single charge. Designed for military and law enforcement, this flashlight is shock-proof and can be used defensively.

Manufacturer's Comment: *"The FLX features a 1,200-lumen lamp and is flat-out powerful. Hand-held or weapon-mounted, it lights your way through any situation."* –RYAN HILLS, PRODUCT SPECIALIST

4 GUARD DOG SECURITY

PRODUCT: GUARD DOG SOLAIRE 900 LUMEN RECHARGEABLE TACTICAL FLASHLIGHT
WEBSITE: www.guarddog-security.com
MSRP: $129.95

Specifications:
- **Light Source:** CREE bulb
- **Output:** Ultra bright, 900 lumens; high, 145 lumens; low, 30 lumens; strobe, 900 lumens; S.O.S., 900 lumens
- **Length:** 9.5 inches
- **Weight:** 12 ounces
- **Power:** A/C rechargeable

Defining Features: Guard Dog Security's widest and brightest beam is the Solaire 900 Lumen Tactical Flashlight. This blinding beam spans 20 yards wide and can fully illuminate an enclosed area more than two football fields away. The Solaire has a completely waterproof body and anti-roll shaft. Additionally, the glowing green O-rings ensure the light won't get lost in the dark.

Manufacturer's Comment: *"Drop it or drown it, the Solaire is the premium in tactical flashlights."* –YASIR SHEIKH, DIRECTOR OF MARKETING

"HAND-HELD OR WEAPON-MOUNTED, IT LIGHTS YOUR WAY THROUGH ANY SITUATION."

3 BARSKA $271.50

"DROP IT OR DROWN IT, THE SOLAIRE IS THE PREMIUM IN TACTICAL FLASHLIGHTS."

4 GUARD DOG SECURITY $129.95

5 COAST

PRODUCT: PX25
WEBSITE: www.coastportland.com
MSRP: $49.99

Specifications:
- **Light Source:** LED
- **Output:** 208 lumens
- **Runtime:** 6 hours, 15 minutes
- **Beam Distance:** 419 feet
- **Batteries:** Three AAA (included)
- **Length:** 4.7 inches
- **Weight:** 4.2 ounces
- **Colors:** Black

Defining Features: The Coast PX25 LED Flashlight outputs 208 lumens in a convenient-to-carry package. It produces a focused spot out to about 419 feet along with an outer ring of light, allowing broader side vision. The PX25 has been tested and rated to ANSI/FL1 standards.

Manufacturer's Comment: *"It goes anywhere, lights a great area and takes a beating."* –KEVIN CORCORAN, MARKETING COMMUNICATIONS MANAGER

6 FOURSEVENS

PRODUCT: MAELSTROM MM-X WITH BURST MODE
WEBSITE: www.foursevens.com
MSRP: $120

Specifications:
- **Light Source:** LED Emitter CREE XM-L2
- **Output:** Moonlight, 0.5 lumens, 25 days; low, 32 lumens, 21 hours; medium, 250 lumens, 3.7 hours; high, burst at 900 lumens, 1 minute, then 450 lumens, 1.5 hours; strobe, 10 hertz, 1 hour; S.O.S., 4.5 hours; beacon, 12 hours
- **Length:** 6 inches
- **Weight:** 5.1 ounces

Defining Features: The Maelstrom MM-X has been given a boost with Burst Mode. It now outputs a whopping 900 lumens for 60 seconds on high before ramping down to 50 percent. Designed to perform in harsh conditions.

Manufacturer's Comment: *"One of our most powerful lights just got brighter. It's an awesome unit."* –DAVID CHOW, FOUNDER/PRESIDENT

"IT GOES ANYWHERE, LIGHTS A GREAT AREA AND TAKES A BEATING."

5 COAST $49.99

6 FOURSEVENS $120

"ONE OF OUR MOST POWERFUL LIGHTS JUST GOT BRIGHTER."

"THE PD22 IS COMPACT, WATERPROOF AND WELL SUITED FOR OUTDOOR ACTIVITIES LIKE HIKING, CAMPING AND EDC."

7 FENIX

PRODUCT: PD22 XP-G2 (R5)
WEBSITE: www.fenixlight.com
MSRP: $55

Specifications:
- **Light Source:** Cree XP-G2 (R5) LED with a lifespan of 50,000 hours
- **Output:** Turbo, 210 lumen, 2 hours; high, 105 lumen, 5 hours; medium, 45 lumen, 12 hours, 30 minutes; low, 3 lumen, 120 hours; strobe; S.O.S.
- **Batteries:** One 3V CR123A
- **Length:** 3.5 inches
- **Weight:** 1.55 ounces

Defining Features: The Fenix PD22 is a high-intensity flashlight with side mode switch. With four brightness levels, it maximizes up to a 210-lumen output and a 120-hour runtime. The digitally regulated output controls constant brightness. It also features reverse polarity protection, to guard against improper battery placement.

Manufacturer's Comment: *"The PD22 is compact, waterproof and well suited for outdoor activities like hiking, camping and EDC."*
–KEVIN KARADAG, BRANDING SPECIALIST

7 FENIX $55

"OUR LIGHTS ARE DESIGNED TO THROW LOTS OF LIGHT LONG DISTANCES."

8 AE LIGHT

PRODUCT: AE LIGHT P.I. TACTICAL RECHARGEABLE CREE LED FLASHLIGHT
WEBSITE: www.aelight.com
MSRP: $95

Specifications:
- **Light Source:** 3 Watt CREE Q5
- **Output:** 200 lumens
- **Runtime:** 4 hours with rechargeable battery with fading up to 6 hours; 2 hours with CR123A
- **Beam Distance:** 300 feet
- **Batteries:** Rechargeable lithium ion 3.7V, 2200mAh, circuit protected (not included); also accepts two 123A primary batteries (included)
- **Length:** 5.5 inches
- **Weight:** 3 ounces
- **Colors:** Black, rose and blue
- **Charge Time:** 6 hours/no memory accepts partial charge

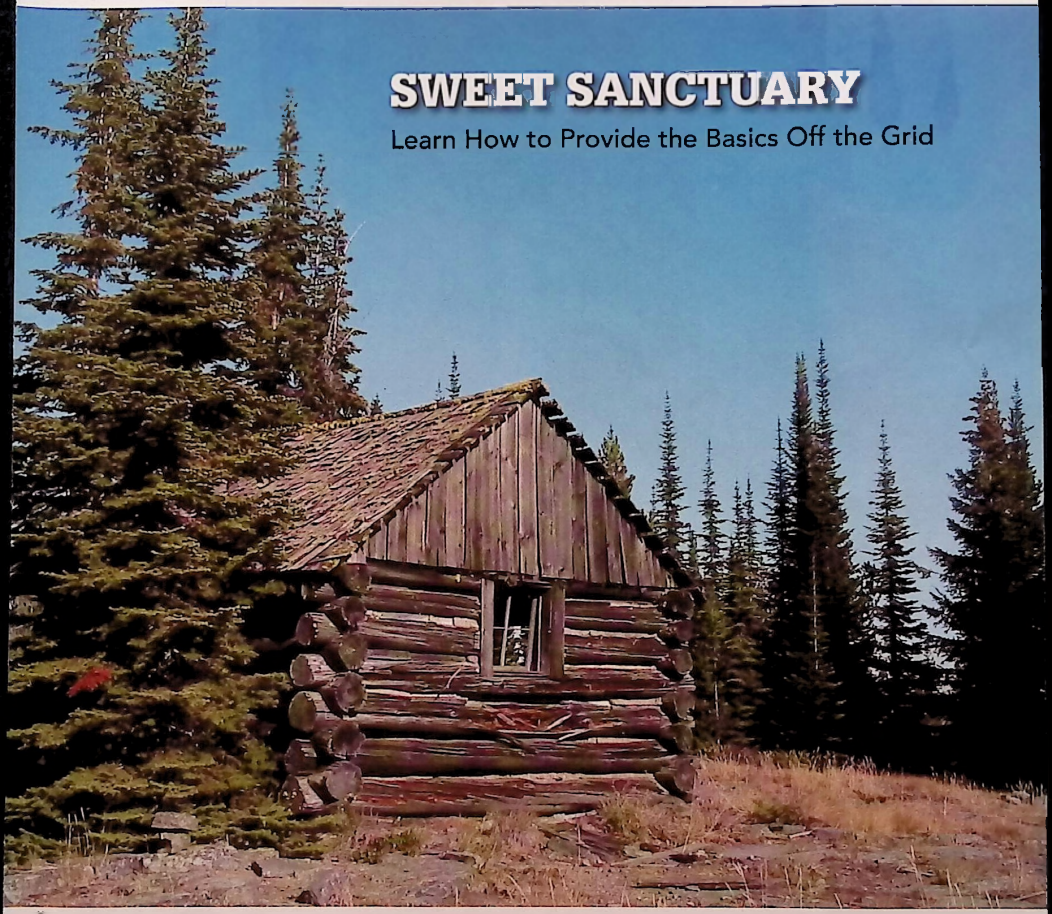
Defining Features: This 200 lumen LED Tactical Flashlight (TGPI), has a powerful beam that projects up to 300 feet and fits in the palm of your hand. Simply press the on/off switch and it turns on reliably. Lightly touch the switch and you can momentarily flash the light. For those wanting more functions, an optional High/Low/Strobe LED module is available with all functions accessed by simply pressing the switch to rotate through each function. AC/DC charger can be added at any time for use with rechargeable lithium ion battery.

Manufacturer's Comment: *"Our lights are designed to throw lots of light long distances. They're really not for use for up close and personal. If you need to shine a light down at your feet to see what's there, our lights are too powerful."* –MARC ALLSMAN, OWNER

8 AE LIGHT $95

SHELTER

IN THIS SECTION WATER COLLECTION + SMALL-CABIN LIVING + OFF-GRID SANITATION



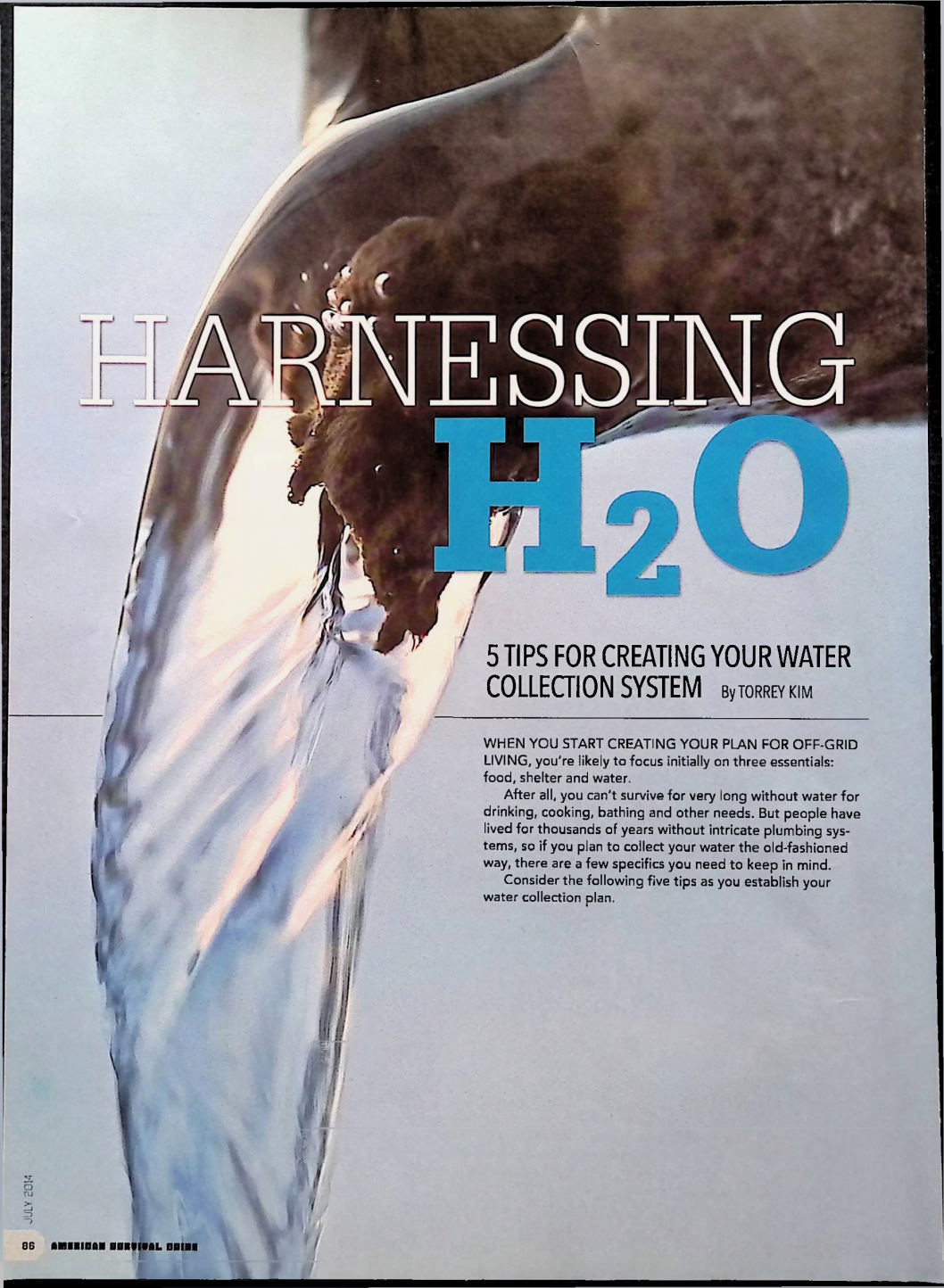
SWEET SANCTUARY

Learn How to Provide the Basics Off the Grid

PHOTO BY THINKSTOCK

IT'S NOT EVERY DAY you see a remarkably built, ultra-small living space that makes you green with envy, but when you do, you never forget it. Shelter is essential, and the smaller you can build your home, the easier and more cost-effective it can be to heat, cool and furnish.

On the following pages, we'll take you inside of a tiny cabin to figure out just how to live with less space. We'll also show you how to ensure that you have enough water for your family to survive, and we'll share answers to everyone's favorite question: How do you shower and handle your sanitation needs when you're off the grid?



HARNESSING H_2O

5 TIPS FOR CREATING YOUR WATER COLLECTION SYSTEM

By TORREY KIM

WHEN YOU START CREATING YOUR PLAN FOR OFF-GRID LIVING, you're likely to focus initially on three essentials: food, shelter and water.

After all, you can't survive for very long without water for drinking, cooking, bathing and other needs. But people have lived for thousands of years without intricate plumbing systems, so if you plan to collect your water the old-fashioned way, there are a few specifics you need to keep in mind.

Consider the following five tips as you establish your water collection plan.

PHOTO BY THINKSTOCK

This rain barrel is connected directly to the gutter to optimize water collection.

1 WATER BARRELS

One of the most common ways to collect rainwater for your homestead is by installing water barrels throughout your property. The best way to collect the maximum amount of water in these vessels is to place them directly under your gutter downspouts. The gutter will direct the rainwater into your barrels and they can fill up quickly after just one storm. To keep mosquitos, leaves and animal droppings out, place a tightly woven screen over the barrels so the water can get in but the unwanted critters stay out. Clean off the screen daily so that water can flow freely through it.

Although many people simply dip a pail into the barrel every time they need water for the garden, others attach hoses—and even solar pumps—to their barrels so they can distribute water from them without an issue. These can be effective because a 50-gallon (or more) rain barrel can be very difficult to move once it's filled with water.

Keep in mind, however, that this solution won't necessarily work everywhere.

"I do like water barrels, but in some states, they're actually illegal, so it's not the perfect answer for everybody," advises Chris McLaughlin, author of "A Garden to Dye For" and About.com's homesteading expert. "I've never placed them throughout a garden but have had them stationary in a basic spot (next to the house)."

"I DO LIKE WATER BARRELS, BUT IN SOME STATES, THEY'RE ACTUALLY ILLEGAL, SO IT'S NOT THE PERFECT ANSWER FOR EVERYBODY."
–CHRIS MCLAUGHLIN, AUTHOR OF "A GARDEN TO DYE FOR" AND HOMESTEADING EXPERT FOR ABOUT.COM

CLEANING YOUR CISTERN

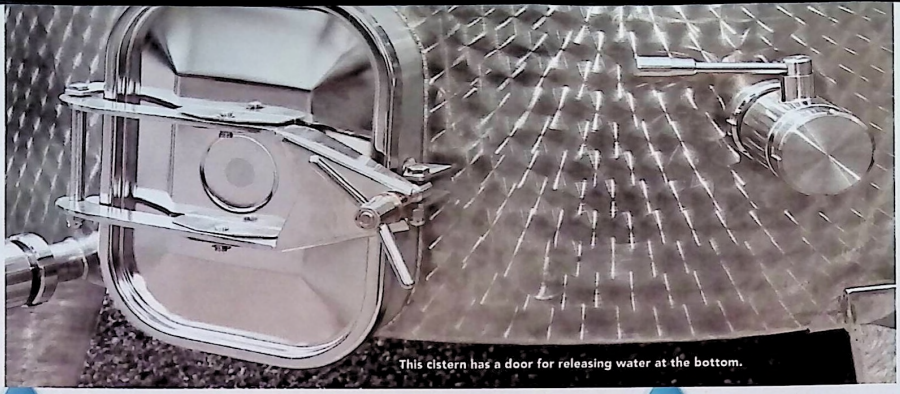
The Centers for Disease Control (CDC) recommends cleaning your cistern after a heavy rain or flood if you use your cistern as a potable water source, as these events can wash debris and pollutants into your catchment system and contaminate the water. To clean the cistern, use the following steps:

- Clean the catchment area (such as the roof and gutters) and remove debris.
- Take all the water out of the cistern.
- Scrub the cistern with a stiff brush and a solution of 1 cup unscented bleach and 10 gallons of water.
- Rinse the cistern with clean, safe water, then drain and refill (or leave empty to catch additional water).

SOURCE: WWW.CDC.GOV

FOR MORE INFO

To read more from Chris McLaughlin, homesteading expert for About.com, visit homesteading.about.com. To get in touch with Alan Hales of LandCare Innovations, visit www.landci.com.



This cistern has a door for releasing water at the bottom.

PHOTOS BY THINKSTOCK

2 CONSIDER A CISTERN

Suppose you've tried rain barrels and found them to be efficient—but you can't possibly buy enough of them to store all of the water you're able to catch in a year through rainstorms. The next logical step is to invest in a cistern, which is simply a way of describing a larger water storage area. It can be anything from a hole you've dug and lined with tarps to an elaborate design that resembles a swimming pool and can hold water for you to use when you're ready.

In fact, you can even create a cistern that collects water and stores it underground, the Environmental Protection Agency says on its website.

"Both cisterns and rain barrels can be implemented without the use of pumping devices by relying on gravity flow instead," the EPA indicates. "Rain barrels and cisterns are low-cost water conservation devices that reduce runoff volume and, for very small storm events, delay and reduce the peak runoff flow rates."

Because the water collected in cisterns and rain barrels is chemically untreated, it's often the ideal source for your gardens, compost and for flushing toilets. Although above-ground cisterns can be built at low cost, you could invest $15,000 or more if you install an underground cistern or build a structure around your cistern to keep it safe from insects, bird droppings and varmints.

As with the rain barrels, you should try to minimize the odds of this happening in a cistern by installing screens over it and checking on it frequently. If the cistern is being used exclusively for your garden or compost, you may be less diligent about keeping insects out, but keep in mind that you absolutely don't want to attract a mosquito infestation to your off-grid property.

4 BACKFLOW

If you do install a well and you plan to connect it to an irrigation system in your yard as well as use the water for your family's drinking and bathing needs, be sure and install a backflow prevention system so your water remains clean.

"While laws vary across the country, backflow preventers are required on all irrigation systems that use water from a potable water source," says Alan Hales, operations manager with LandCare Innovations in Charlotte, N.C. "These backflow preventer devices prevent contaminants from being drawn back into the potable water system should there be a low-pressure situation upstream on the water system."

3 A WELL OF KNOWLEDGE

Although many people who are new to the off-grid lifestyle might confuse a well with a cistern, there is one major difference. While a cistern collects and stores water produced by rainstorms, a well is a self-generating hole dug so deep into the earth that water naturally fills it from below.

As you are probably aware, in early America, many people dug their own wells by simply continuing to pull dirt out of the hole by hand, bucket by bucket, until they hit water. There are a few challenges with this method, however. First, the risk of the well caving in while you're digging it is very real and quite dangerous. Second, depending on where your water table sits, the water could actually be 100 feet below ground or even further. Realistically, it would be very difficult to dig this deep by hand. Plus, the water could potentially be unsanitary if you don't successfully line the well.

Instead, you should consider drilling the well, either by renting a water drill or by hiring a water drilling company to do it. You can then "case" or line the well with materials that will allow the water to stay sanitary for your family's use.

Creating your own well on your property offers you an opportunity to have a self-replenishing water source for years.

THINKSTOCK

The Go Berkey Kit from Berkey Water Purification Systems purifies both treated and untreated raw water from sources including lakes, streams, stagnant ponds and water supplies.

PHOTO COURTESY OF REVERWALTER.COM

5 PURIFICATION

If you intend to collect water via rain barrels or a cistern and use it as a potable water source, you'll need to purify it before you drink it just as you would any water that you find in the wild. To do this, you'll need to remove the set amount of water that you intend to consume from your cistern or barrel and then use your water purification device—your preference of laser, boiling, tablets or bleach—to make the water safe.

This system is effective when you plan to drink the water on an occasional basis, but if your plan is to use the cistern exclusively as your sole drinking water source, then you (or a hired professional) should test the water in your cistern to calculate how much purifier (such as chlorine) that you'll need to add to the cistern before the water is drinkable. After adding the purification solution, retest the water once more to ensure that it is acceptable.

"WHILE LAWS VARY ACROSS THE COUNTRY, BACKFLOW PREVENTERS ARE REQUIRED ON ALL IRRIGATION SYSTEMS THAT USE WATER FROM A POTABLE WATER SOURCE." –ALAN HALES, LANDCARE INNOVATIONS, OPERATIONS MANAGER

WELLS AFTER STORMS

If you use your water well as your family's source of drinking water, you should be sure to maintain its integrity, especially after a flood, earthquake or other disaster. "If the well is not tightly capped or properly grouted, sediment and flood water could enter the well and cause contamination," the CDC says on its website. If your well is less than 50 feet deep, you have a higher chance of contamination, so always have a professional inspect your well if a disaster hits your property.

SIMPLE FACT

Strictly discussing drinking water (and not the amount of water you'll need to bathe, garden or use the toilet), you should ensure that you have access to at least 1 gallon of drinkable water per day, per person.

PHOTO BY THINKSTOCK

LET IT POUR

YES, YOU CAN HAVE A HOT SHOWER OFF GRID

By TRACY BREEN

SURVIVAL IS A RUGGED EXISTENCE, no doubt. But how great would it be to be able to have an actual shower off grid?

Whether you are a backcountry guru who likes to camp off the beaten path, a prepper who wants to stay clean if disaster strikes or an off-gridder, one thing is certain: A nice hot shower at the beginning or end of the day is a treat that can't be beat.

Technology has come along way in the last decade, and, now, there are plenty of hot shower options on the market. And if you're the DIY type, you just may be able to craft your own hot shower system.

CAMP SHOWER

Probably the easiest hot shower available is the simple camp shower bag. In my travels to campgrounds and on my backcountry trips, I regularly see these. A camp shower is a simple black bag that holds up to 5 gallons of water. The bag is always black because a black bag

A camp shower, such as this Zodi system, is a great choice for the off-grid cabin owner.

"A NICE HOT SHOWER AT THE BEGINNING OR END OF THE DAY IS A TREAT THAT CAN'T BE BEAT."

easily collects heat from the sun and warms up the water. This little bag may not look like much, but the truth is that after a day in the direct sun, the water in the bag can rise to more than 100 degrees. Connected to the black shower bag is a simple shower hose with a small showerhead; all you have to do is turn a valve to make the water come out.

I have used this nifty style of shower a lot. Most of the time, you turn on the shower, get your body wet, turn the valve off, lather up with soap and then rinse off. This allows you to conserve a lot of water and, if everyone plays nicely, enables several people to take a shower with one full bag. The only problems with this system are that it takes some time to warm up the water and, if the sun isn't out, you will be taking a cold shower.

THE ZODI

This small propane-tank camp shower is probably the most popular brand on the market. It runs off a 1-pound propane tank like you see in small lanterns; the shower features a small hose with a battery-powered pump on the end that you put into a small tub of water. The pump sucks the water out of the small tub and runs it through a copper tubing line where the propane burner heats it up as it passes through the tubing.

When you want the water to come out of the showerhead, you turn the pump on. When you don't want to be sprayed with water, you turn it off or place the showerhead in the tub of water and let the water circulate. This system heats up water quickly and works well. I have this shower system and have used it a lot throughout the years when camping and staying at my off-grid cabin. I even have a camp shower shelter that we use with the shower system; it's a basic tent-like structure that enables you to shower in privacy.

ON-DEMAND H2O

On-demand hot shower systems that run off propane are also becoming popular and are great for off-grid living. These are also becoming popular in residential homes because they use far less energy than a traditional hot water heater that has a large tank.

My friend Brian Bychowski owns a remote cabin in Illinois; he employs an on-demand water system and he loves it.

"I have a 350-gallon water holding tank that's connected to our kitchen and shower building via a series of garden hoses," he says.

PHOTO COURTESY OF WWW.SPORTSMANGUIDE.COM

ON DEMAND

At www.eccotemp.com, you can find a wide range of on demand water heaters, including the L5 Portable Tankless Hot Water Heater, priced at just $119.

IN THE BAG

Pros: Conserves water, easy to operate, super affordable

Cons: No sun means no hot water

"FOR THOSE WHO LIVE OFF THE GRID, TANKS THAT HOLD A THOUSAND GALLONS OF WATER ARE AVAILABLE."

A large water holding tank is one way to provide water for showers and kitchen chores.

PHOTO COURTESY OF TRACY BREEN

PHOTO COURTESY OF WWW.SPORTSMANS.COM

TAKE SHELTER

There are some great shower shelters on the market if you don't feel like making your own. Check out the TexSport Camp Shower/Shelter Combo, available online at www.sportsmansguide.com and at a number of big box stores. It retails for about $40 and provides a fine place to clean up!

"We have a Eccotemp on-demand propane shower that connects to the water tank and a propane tank along with an inexpensive pump that pulls the water out of the large tank and a heater that warms the water to 150 degrees almost instantly. It works great."

Like many people with remote cabins, Bychowski built a separate building to house his shower.

"We put in a 6-by-8-foot Rubbermaid storage building," he says. "We have a shower base to stand on, and everything we need is hooked up to that building. Because the building is plastic, we don't have to worry about wood rotting or getting anything wet. We walk inside, take a shower and leave the building up all year. When the holding tank gets low, we get it filled back up with water."

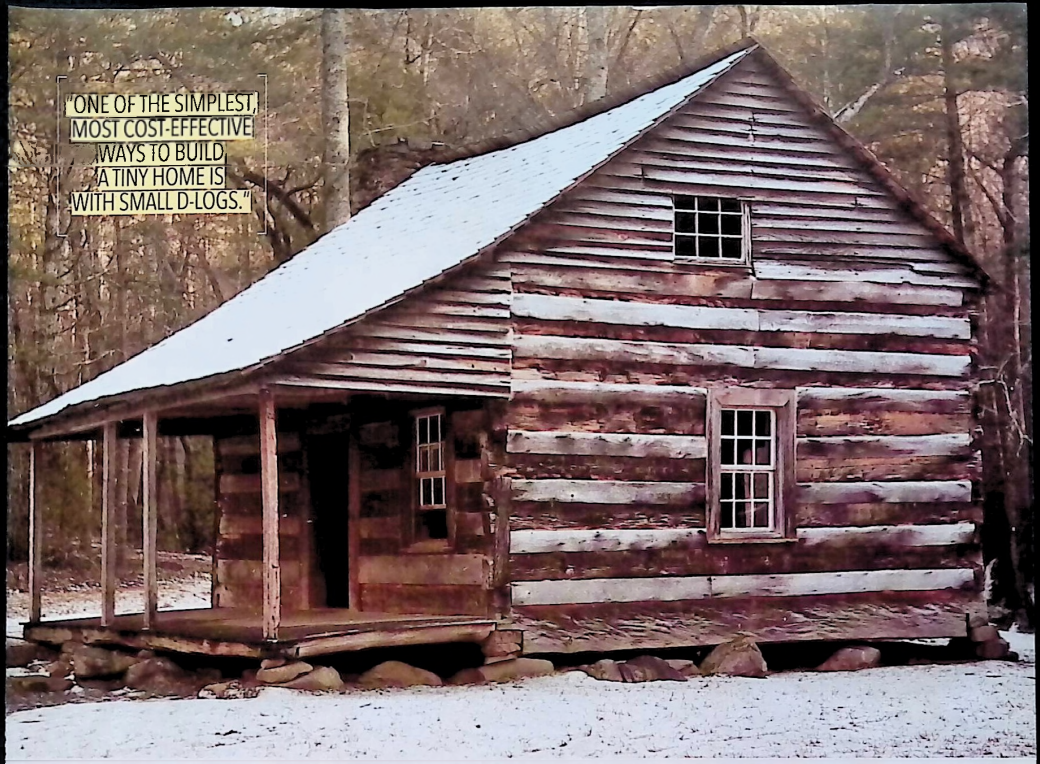
For those who live off the grid, tanks that hold a thousand gallons of water are available.

If you want a similar system but want a portable tank, a 16-gallon plastic keg or even a 55-gallon plastic drum will work.

Building a remote cabin near some type of water source (instead of using a holding tank) is another way to use an on-demand hot water heater; you can just pump the water from a stream, lake or river. I have friends that pump water up to an off-grid cabin, where they use gravity to feed the water down to their shower stall. They use propane to heat the water and have a hot shower daily.

EASY PEASY

The important thing to note is that all of these systems mentioned are inexpensive and can be easily put together without a lot of plumbing knowledge, which is very important when you're trying to live within your means and skill set.



CABIN FEVER

YOU, TOO, CAN BUILD A HOME FOR A FEW THOUSAND DOLLARS!

Text and Photos By TRACY BREEN

IN THE LAST 10 YEARS, the tiny house movement has exploded. And that's a good thing for those who want to live off grid.

Building a simple small home can be inexpensive and provide financial freedom.

Whether it's living off the grid in a small cabin or living in a small, suburban home that isn't plugged into the grid, simplifying your life and moving into a small home is something almost anyone can do.

DECISIONS, DECISIONS

You must first decide how small of a space you want to live in.

Many of the people at the heart of the small-home movement suggest living in a house that is smaller than 150 square feet.

In many cases, these homes are on wheels and they're decked out and look like tiny mansions. Although this style of home or cabin is awesome, they are usually very expensive. In some cases, the tiny houses on wheels cost $40,000 or more. I suggest building your own small cabin or home on your own as, for many people, a $40,000 house will require a loan.

D-LOGS

Throughout the last decade, I spent a fair

TINY CABIN PROS

- Inexpensive
- Sturdy
- Holds heat well
- Stands up to elements

John Engelken, the author's friend, built his small cabin for about $5,000.

A composting toilet works great in an off-grid cabin.

"MANY OF THE PEOPLE AT THE HEART OF THE SMALL-HOME MOVEMENT SUGGEST LIVING IN A HOUSE THAT IS SMALLER THAN 150 SQUARE FEET."

amount of time in Alaska. I discovered that people in Alaska know how to build inexpensive functional homes better than anyone in America. One of the many reasons for this is that many places in remote Alaska don't have strict building codes. With relaxed building codes, building an inexpensive home is much easier. Make sure you check the building codes where you plan to erect your cabin before you build.

One of the simplest, most cost-effective ways to build a tiny home is with small D-Logs. In Alaska, D-Log homes are extremely popular. A D-Log is flat on three sides and round on the fourth side, which is the exterior side.

I've seen D-Log homes built out of logs ranging from 8 to 16 feet long, and the 8-foot logs are only 6 inches in diameter. Smaller logs are easier to handle, which, if you're building a small home that is less than 1,000 square feet, allows most of the heavy lifting being to be done by a couple of adults and a small farm tractor. This means you won't need cranes or other heavy equipment.

With a D-Log shell, once the walls are up, you need very little interior work unless you want drywall, which isn't essential. You can buy a small-diameter log package for as little as a few thousand dollars, and with a little blood, sweat and tears, you don't need to spend much more. A bonus: D-Log homes also hold the heat very well and stand up to inclement weather.

Adam White, a bush pilot, lives in a D-Log home in Alaska. He claims that "a D-Log package can be milled relatively inexpensively. The skills required to build such a home can be learned. Adding on to a D-Log home isn't extremely difficult, so if a family outgrows their home, they can add on."

STICK FRAME

If a log home isn't for you, you might want to try a simple stick-frame cabin. A friend of mine, John Engelken, a professional blood tracker, built a small cabin in the Midwest for about $5,000. The cabin has some rustic appeal and is easy to heat.

"I love my one-room cabin. When building a small cabin, the key is to make sure you have extra-thick walls that hold lots of insulation," Engelken says. "My cabin rarely needs to

Small cabins like this one are inexpensive and can often be built without a mortgage.

be heated even when it is cold. The body heat from my dogs and I keep it warm. When it gets really cold, a 30-minute fire has us roasting in no time."

REPURPOSE

I built a small cabin a few years ago in the north woods. It cost me about $2,000 and is totally livable. I was able to build it so inexpensively because I utilized a lot of used materials. The most expensive thing on my cabin was the metal roof, which cost almost $1,000. Finding used windows, doors, sinks and other materials that can be purchased for pennies on the dollar is very doable.

SIMPLIFY

Many of today's tiny homes are wonderful little homes, but many of them cost a small fortune. If you want a simple home that doesn't require a mortgage or the need for a contractor, consider building a small D-Log home or a small stick-built cabin. It's easy to maintain and can provide you with a simple, stress-free life.

Tracy Breen is a Wild Game Dinner speaker and outdoor writer. In the past several years, he has been blessed to hunt, fish and speak all over North America.

LOG CABINS: FUN FACTS

Log cabins were often built small, from 10 feet wide by 12 to 24 feet in length.

Many log cabins used the frontier log cabin style of construction, which featured squared and notched logs that overlapped at the corners of the structure.

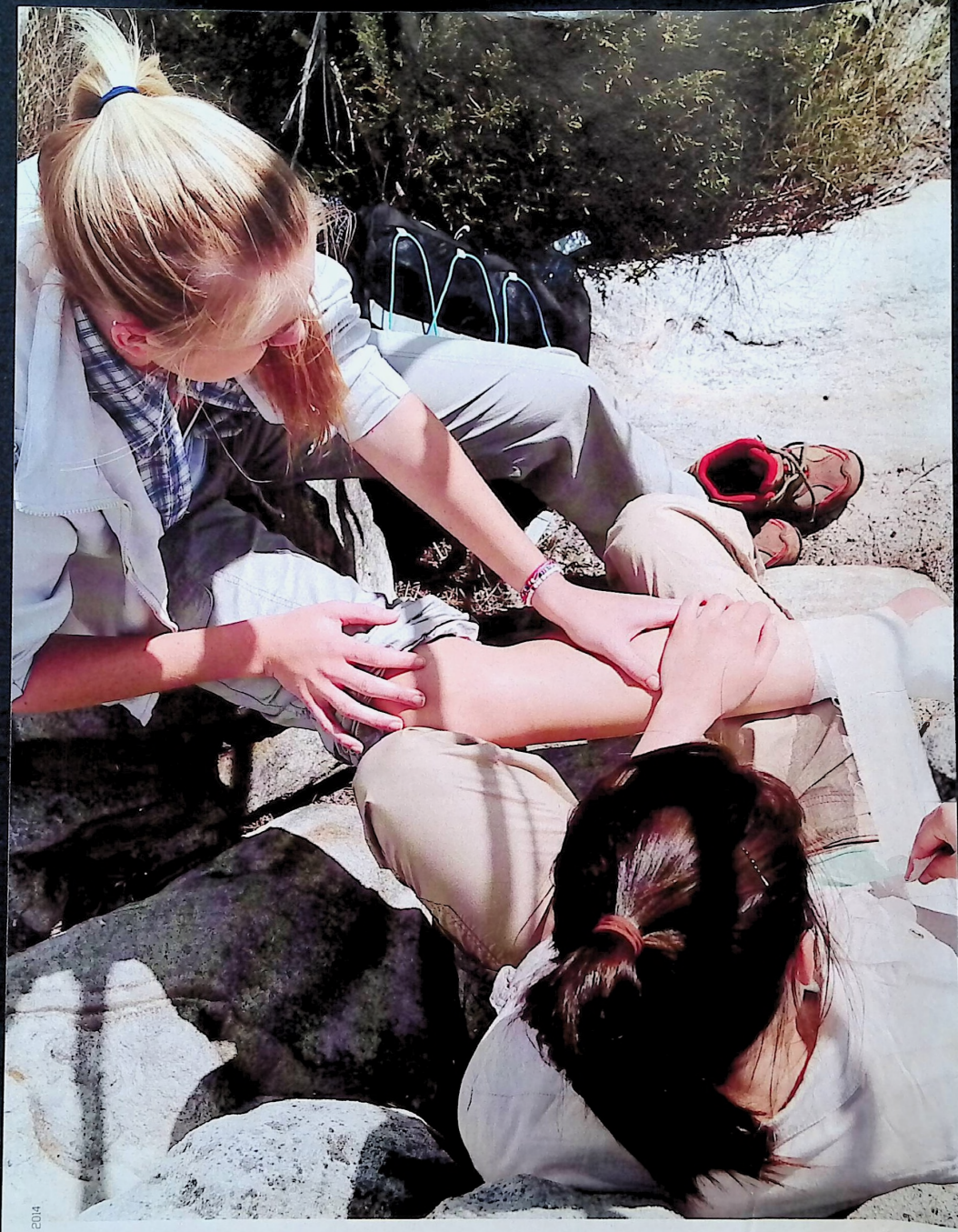
Large stones were used as foundation points, which kept the logs out of direct contact with damp soil.

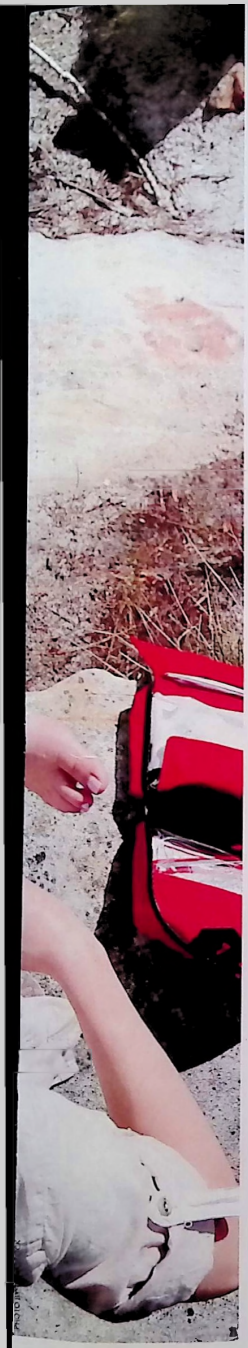
Log cabin construction required stuffing material such as leaves, moss and dried manure between the logs for insulation and filler. This stuffing was then covered with mud, both inside the cabin and out, to create "chinking" to seal out the elements.

SOURCE www.ws.gov.bc.ca

PLUMBING

One of the most expensive parts of building any home is plumbing for the toilet. To avoid this expense, consider purchasing a composting toilet. I recently starting using a Nature's Head composting toilet and it works great. The wonderful thing about a composting toilet is it breaks down the solid waste, so no plumbing is needed. When the toilet is full, you empty it. The Nature's Head toilet separates the solids from the urine so there isn't a lot of odor, which is what many people worry about when considering a composting toilet. When used properly, a composting toilet often has a dirt-like smell. To learn more about Nature's Head composting toilets, visit www.natureshead.net.





FIRST AID FUNDAMENTALS

LEARN HOW TO DRESS A WOUND IN AN EMERGENCY SCENARIO

Excerpt from the book "Living Ready Pocket Manual - First Aid: Fundamentals for Survival" by JAMES HUBBARD, M.D., M.P.H.,

The Survival Doctor, published by Living Ready Books. Available online and wherever books are sold.

IN ANY DIRE SITUATION, ONE HAS TO BE PREPARED FOR MEDICAL EMERGENCIES.

If you're living off the grid, it's particularly important to ready yourself for first aid fixes as it's likely you'll have to handle what comes up yourself.

Read on to find out what to do if you have to put on the doctor hat.

CUTS AND LACERATIONS

A laceration is when soft tissue on the body is torn, cut or punctured. Some small cuts bleed profusely, and other more serious cuts hardly bleed at all. There are deep cuts, shallow nicks, scrapes and gashes on the face or the foot.

Knowing which ones are "serious" can often be a judgment call. But even the tiniest wound is potentially serious because it damages our first defense against germs—the physical barrier of our skin. If not cleaned and kept that way, that little ant bite could lead to a mighty infection.

There are six steps to treating any cut or laceration:

- Stop the bleeding.
- Assess the damage.
- Clean the wound.
- Decide on treatment.
- Close the wound (if appropriate).
- Watch for infection.

MAKE STERILE DRESSINGS

Normally, you can use sterile gauze to dress or pack a wound. But if no sterile gauze is available, find any clean rags or cloths and sterilize them. You can do this in one of two ways:

- Boil them in water for one to three minutes. (Cool the the rags before packing them into the wound.)
- Soak the clean rags with a mixture of nine parts clean water to one part Betadine (povidone-iodine). For instance, mix 9 ounces (270 milliliters) of water with 1 ounce (30 milliliters) of 10-percent Betadine.

After you sterilize the dressing material, apply antibiotic ointment to the wound (or to the material if you're using the gauze for packing). Then, cover the wound with the rags. Tape the rags or tie a cloth around them to keep the dressing in place. (Important: Don't tie tightly enough to cut off circulation.)

Change the dressing daily or at least every two days. Also change it if the dressing gets wet or especially dirty.

If you can't sterilize the cloths, just coat the wound with antibacterial ointment or honey and cover with a clean cloth.

MAKE PRESSURE DRESSINGS

Pressure dressings are bandages that press down on a wound. Most of the time, this is to stop the bleeding.

Never use a pressure dressing for a full wrap: Don't wrap a pressure dressing all the way around an extremity (arm or leg) if you can help it. If you wrap any bandage too tightly around an extremity, you've got a tourniquet. The bandage will also become a tourniquet if the extremity swells and the bandage has no give. You've cut off the blood supply coming from the arteries, and the tissue distal (farthest from the heart) to the dressing is going to die.

Use bulk to add pressure: To your normal dressing, add extra layers of gauze or bunch up some clean cloth on the wound area. Sanitary napkins are another option. When you tape the dressing down, the bulk of the extra dressing will press on the wound, but it will also have some give so it doesn't cut off circulation if the area swells.

Affix the dressing: Tape the dressing down firmly, placing tape only about one-half or two-thirds of the way around an extremity. Or use an elastic bandage instead of tape. Wrap the bandage firmly but not too tightly. You should be able to stick a couple of fingers under the wrap.

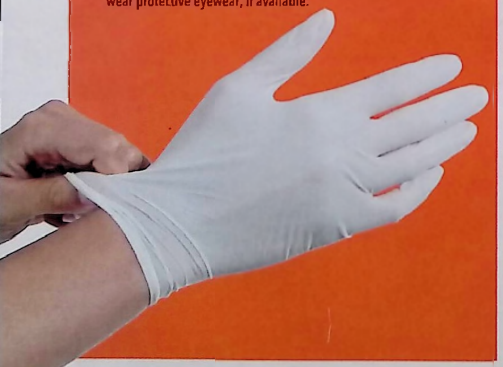
Keep track of circulation: If the hand or foot gets discolored, cold or tingly, loosen the pressure dressing immediately. Until you can readjust it, you can press on the bandage with your hand to stop the bleeding.

STERILIZE YOUR INSRUMENTS

Unless you have a commercial autoclave and a power source or some prepackaged sterile products, you're going to have to make do with what you have and sterilize as best as you can.

TREATMENT TIP

Protect yourself before you treat someone else's wound. If there's a chance you could be exposed to blood, wear vinyl or latex gloves or some sort of plastic cover for your hands, and also wear protective eyewear, if available.



Before you sterilize, always clean any obvious debris off your instruments. Clean with soap and water or alcohol. Use a cloth or brush if needed.

Quick Methods for Sterilization

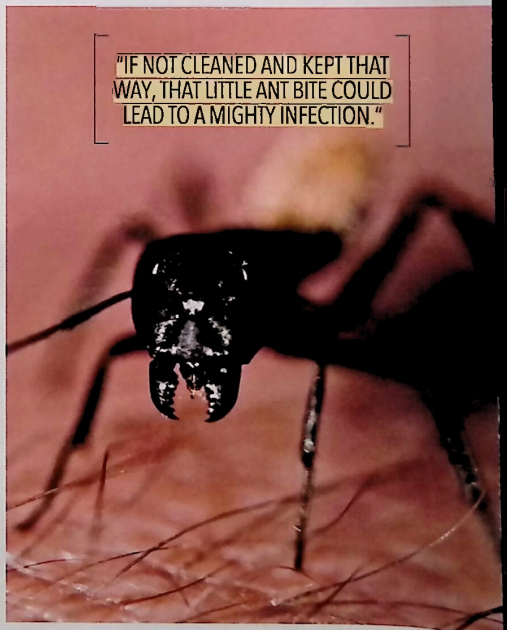
Heating the instrument: Hold the part that's going to touch the injury over an open flame. If the handle is also metal, find something to hold the instrument with so you don't burn your fingers. Heat until the metal turns red; that's long enough. Then, let the instrument cool and you're ready. If you have alcohol, you may also want to dip the instrument in that just for good measure.

Using a disinfectant: If you don't have fire and you're in a hurry, you can wipe the instrument off with a clean cloth soaked in iodine, povidone-iodine (Betadine) or alcohol. No clean cloth? Dip the instrument in the solution and stir it around for 10 seconds.

Sterilization Methods that Take Longer

Boiling: This is a good method for larger instruments or those that might melt under the flame. Let the instrument soak in boiling water for 20 minutes.

Use a disinfectant for a longer amount of time: Soaking the instrument in disinfectant for 20 minutes is better than the wiping/dipping method.



"IF NOT CLEANED AND KEPT THAT WAY, THAT LITTLE ANT BITE COULD LEAD TO A MIGHTY INFECTION."

"IF THE HAND OR FOOT GETS DISCOLORED, COLD OR TINGLY, LOOSEN THE PRESSURE DRESSING IMMEDIATELY."

PHOTO BY THINKSTOCK

WHAT TO DO BEFORE AND AFTER A PROCEDURE

- Always wash your hands
- Wear clean gloves, if available, to protect yourself and the victim.
- Wash any object that came in contact with infectious bodily fluids with disinfectants immediately after the procedure is finished.

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KEEPIN' IT CLEAN

HOW TO HANDLE LONG-TERM SANITATION AND HYGIENE ISSUES

Text and Photos By TONY NESTER

DID YOU KNOW that not washing your hands can lead to serious illness?

I once asked a friend, who had been a professional guide for 27 years in the wilderness, what the major causes of needing to administer first-aid were on his long-term trips. He replied that, aside from the usual cuts and soft-tissue injuries, lack of hygiene and daily hand washing were responsible for more illness than anything else. This was usually due to one or two people not being diligent with daily hand washing in a group setting where food and gear were being handled. Such negligence resulted in diarrhea-borne illness sweeping through the entire group. In a similar fashion, a true grid-down situation will quickly turn any modern city into an austere setting where you will also face similar hygiene issues.

Follow this template for how to cope with sanitation in a survival situation.

> "DEVELOPING AND MAINTAINING A DAILY HYGIENE REGIMEN DURING A GRID-DOWN SETTING IS CRITICAL FOR AVOIDING THE SPREAD OF BACTERIA AND VIRUSES."

BATHING WHEN THE POWER IS OUT

During our nine-week programs in bushcraft, we use solar camp-showers on a regular basis at our off-grid camp. One of these devices will hold enough water for one person for a brief shower. You will become frugal with water supplies under austere conditions and lengthy showers will become a thing of the past. A word of caution: These camp-showers, when left in the afternoon sun, can become scalding hot, so I fill them only ⅔ of the way, heat them up and then add in ⅓ cold water.

In my younger days, when I lived in a tiny cabin without plumbing, I just did the sheepherder bath, which involved a five-gallon bucket of water filled with warm water and a pitcher for dispensing. While on the trail, a dip in the lake or river a few times a week was sufficient, and I relied on soap obtained from yucca roots or soapwort plants, both of which are found throughout the U.S. I've also used rivers and lakes, even during the winter

TROUT: ©THINKSTOCK

This is the grid-down method for cleaning dishes, pots and utensils that is used by thousands of river-rafters each season. The buckets (from left): cold water for removing large particles, hot soapy water, hot rinsing water and cold bleach water. Change this entire setup with fresh water after each meal.

(bathing frequency was reduced during those months). Soldiers in the field used to do the Helmet Bath, in which they used whatever hot water could be placed into their helmet and a bar of soap.

A good friend of mine who traveled for extended periods throughout remote villages in Nepal told me of the method used in small settlements that he frequented. Travelers staying at the local "bed and breakfast" were provided a daily thermos of hot water and a washcloth! This was not a head-to-toe bath; just the essentials were meant to be cleansed. This is similar to NASA personnel using wet wipes on long space missions and what military personnel do on extended field ops.

Though I wince now, I once had to go 21 days without a shower on a long winter survival trip as the temperature was -30 degrees Fahrenheit for extended periods.

On days when it warmed up above 10 degrees Fahrenheit, I would bath the essentials using a handful of snow and plenty of expletives.

Hand and face washing are critical as time goes by, so don't neglect this vital survival priority during an urban disaster.

As noted, wet wipes make an excellent addition to your hygiene kit and should also be included in a bug-out bag and within your vehicle. A single package will provide enough wipes for a week of daily cleansing if used in moderation. There are also no-rinse shampoos popular within the RV community.

GRID-DOWN SELF-MAINTENANCES

Developing and maintaining a daily hygiene regimen during a grid-down setting is critical for avoiding the spread of bacteria and viruses.

We employ the following routine in our long-term survival courses, and you will find these steps critical in maintaining hygiene during an extended situation. Plus, these are simple things that make you feel human again after being in the grit and elements.

Wash your face each morning with a damp washcloth or bandanna. You'd be amazed at how this can enhance your positive mental attitude—one of the most vital areas of survival.

Brush your teeth. This is easy to forget when you are running on bursts of adrenaline for days on end while dealing with the stress of survival.

Change your underwear and socks daily. This is essential in preventing bacteria buildup. Also, women are at greater risk of developing urinary tract infections—a common occurrence on extended trips within the backpacking industry—if they do not change undergarments daily.

Take a full-body sponge bath twice a week, if water permits.

Be aggressive with cleansing and treating minor cuts or scrapes early on.

WASTE MANAGEMENT

Two days without the utilities running is going to look a whole lot different than going three weeks without a functional toilet or curbside garbage removal. The method you use for coping with such waste management issues will vary depending on whether you live in an apartment, the suburbs or out in the country.

Below are a few alternative bathroom solutions that have been employed by families during urban disasters as well as used by thousands of outdoor enthusiasts each month.

Five-gallon bucket and trash bag. Line a 5-gallon bucket with a trash bag and deposit solid waste in here. Dispose the contents in the backyard or place on the porch until after the

SUPPLY LIST

For your hygiene and dishwashing, obtain the following basic items to start with.

Toilet:
- A 5-gallon bucket with a sealable lid
- A box of 50 2-mil-thick trash bags in the 13-gallon size
- 16 rolls of toilet paper

Bathing:
- Solar, camp shower
- One package of wet wipes per person, per week
- 12 bars of hand soap

Dishwashing:
- Four 3-gallon buckets
- One gallon of household bleach (unscented)

QUICK TIPS: DISHWASHING

First off, plate-licking is encouraged prior to cleaning! You will want to use every last morsel, and this will also help to reduce the food debris in your dishwashing setup.

Bucket 1: cold or lukewarm water with dishrag for removing any food chunks

Bucket 2: hot soapy water with dishrag for cleaning plates/bowls

Bucket 3: hot rinsing water

Bucket 4: cold or lukewarm final rinse with bleach. A capful of unscented bleach in the bucket will do (scented bleach contains detergent that can leave a residue on dishes and make you sick).

Afterwards, wipe off dishes or air-dry them on a rack. The water is replenished in each bucket after every meal. Any food scraps are tossed in the trash or can be composted or buried in the backyard. This is the method we have used for dish cleaning for weeks on end in the field, and it is used by hundreds of river guides each season. It's a very effective, low-tech method when water rationing during an urban crisis.

DIY TOILET

Base: Use a sturdy, 5-gallon bucket as your basis for your portable facility. Weigh it down with a little concrete in the bottom (or collect some rocks at your camping area) to keep it it from blowing over and making a mess

Liner: Use a sturdy, heavy-duty dark garbage bag and bring spares so you can change it daily.

Seat: Cut a hole in the lid of your bucket and leave 1 ½ inch of diameter around the outside, place the lid over the lined bucket to serve as a seat.

Cover: To reduce odor and flies, use another bucket lid to cover the first.

Setup: Set your portable toilet up in a sheltered area, preferably protected by bushes, trees or a tarp to provide cover.

> "THOUGH I WINCE NOW, I ONCE HAD TO GO 21 DAYS WITHOUT A SHOWER ON A LONG WINTER SURVIVAL TRIP …"

crisis. Urban survivors have also simply lined their own home toilet with a trash bag and used this during extended emergencies. Buy a lid for the bucket and a box of 13-gallon trash bags.

Portable toilets. You can also buy high-impact plastic toilets made by the RV and marine industries. These can be found in the camping section of big-box stores. These are basically a more expensive version of the five-gallon bucket method described above and you still have to eventually dump the contents out. Dometic and Thetford both make quality models that are favorites within the RV world.

Outhouse-style pit toilet. This involves digging a 2- to 4-foot hole in the ground and is similar to the type found in backcountry campgrounds. This method is still in use all over the country in rural areas. Obviously, this is not suited to dwellers in high-rise apartments or dense urban areas.

Humanure method. Devised by homesteader Joseph Jenkins, this method basically turns human waste into manure, similar to what is done in Asian countries. This is a very viable method but it works best in humid regions and is not recommended for the Southwest unless you have an ample supply of water. Visit www.humanurehandbook.com for more information.

Home Toilet. Many people in urban disasters have used this method. Even though the water mains in the house or city aren't working, you can often pour water into your home toilet and flush it once a day.

Backpacker's Method. This is the standard method advocated by the backpacking industry for when you are moving camp each day. You need to bury solid waste 4- to 6-inches down in the ground. This is the optimum depth as the existing organisms in the soil will begin to break down the waste compared with just leaving it on the surface.

ODOR MANAGEMENT

Any of the following materials will help to eliminate any foul odors associated with solid waste. A cupful after each visit is all that's needed.

- Sawdust
- Lime (a 20-pound dry bag can be found at hardware stores)
- Wood ash from the fireplace, woodstove or campfire
- Baking soda
- Peat moss (found in gardening and hardware stores)
- Cat litter
- Dirt
- Chemicals such as bleach or RV chem-packets (you need to add a capful once a day or as recommended by that particular company)

TOILET TISSUE

First off, don't let your TP supply run out—be prepared and stock up! The little things in normal life, like toilet paper, quickly become the big things of comfort during a disaster. If you have plenty, then you will also have bartering material. But in your worst-case scenario, you can use the following,

△ An ammo can, or "groover," is the method used by backcountry users and river guides as an improvised toilet. It can be lined with a trash bag or used as is, with the waste being dumped out or buried during a grid-down situation. The addition of bleach, wood ash, cat litter or dirt will help with reducing odors.

◁ Essential hygiene items for the home should include a gallon of unscented bleach, spray disinfectant, hand-sanitizer and wet wipes. The latter two items should also be in your vehicle kit.

in order of preference:

- Non-toxic leaves, such as oak, maple, etc., preferably broad-leafed as a clump of pine needles doesn't work well!
- Shredded newspaper/magazines
- Juniper, birch or cedar bark (fluff up to soften)
- Smooth river stone(s)
- Snowball

Again, stock up now! Survival is all about being prepared so you don't have to resort to these improvised methods.

OFF-GRID LAUNDRY

At our wilderness basecamps, we've used numerous modern off-grid devices billed as tumbling, non-electric washing machines and have found these are not very durable in the long run. The shell or the handle eventually cracks or there are working parts that constantly need replacing.

The simplest method I have found is taking a 5-gallon bucket filled with 4 gallons of hot water and applying a plunger to create the intense swirling action needed to clean the clothes. Now, by "clean," I mean the odor and sweat are removed but not necessarily all the stains. This method takes place through a vigorous five to 10 minutes of plunging in a bucket, so don't expect Kenmore-clean clothes.

One 5-gallon bucket will take care of one pair of pants, a pair of socks and underwear. A tablespoon of liquid soap will suffice. Afterwards, the clothes are strung up on a clothesline to dry in the sun or wind.

The more humid the environment, the more you will have to wash clothes due to sweat and moisture levels.

DISHWASHING

The best method I've used over the years for long-term sanitation comes from the river-rafting community. On Colorado River trips through the Grand Canyon, where large groups of 30 or more people are out for weeks at a time, hygiene is critical. Through rigorous testing by generations of professional guides, the four-bucket dishwashing method was created (see sidebar, page 103).

I recommend this method if you are faced with long-term camping in your home or apartment. For containers, we use the three-gallon, galvanized buckets found in hardware stores as these can be placed directly on the stove or campfire to heat the water. If nothing else is available, then pour the water in some large Tupperware, plastic buckets or even trash bags supported by a ring of rocks on the ground.

A low-tech solution to doing laundry during a long-term crisis. A 5-gallon bucket with a designated plunger and a capful of soap will take care of a pair of pants, shirt and socks. The author used this particular setup while living in an off-grid cabin.

"HAND AND FACE WASHING ARE CRITICAL AS TIME GOES BY, SO DON'T NEGLECT THIS VITAL SURVIVAL PRIORITY DURING AN URBAN DISASTER."

TRASH TALK

If you have the means of burning trash outside and can safely do so, then this is the route to go in a long-term situation.

Newspapers can be saved and used for improvised toilet paper, insulation (crumple it up), firemaking, ground insulation for sleeping or tied into "logs" and used for firewood in the woodstove or campfire. Cardboard has been proven to work well for shelter and mats.

PREPARE

Sanitation is a vital part of off-grid living and can mean the difference between staying healthy and not. Make sure you prepare well for your needs in this area and you'll be prepared to take on whatever is thrown at you. ■■■

Tony Nester is the author of numerous books and DVDs on survival. His school, Ancient Pathways, is the primary provider of survival training for the Military Special Operations community and he has served as a consultant for the NTSB, FAA and the film "Into the Wild." For more information, visit www.apathways.com.

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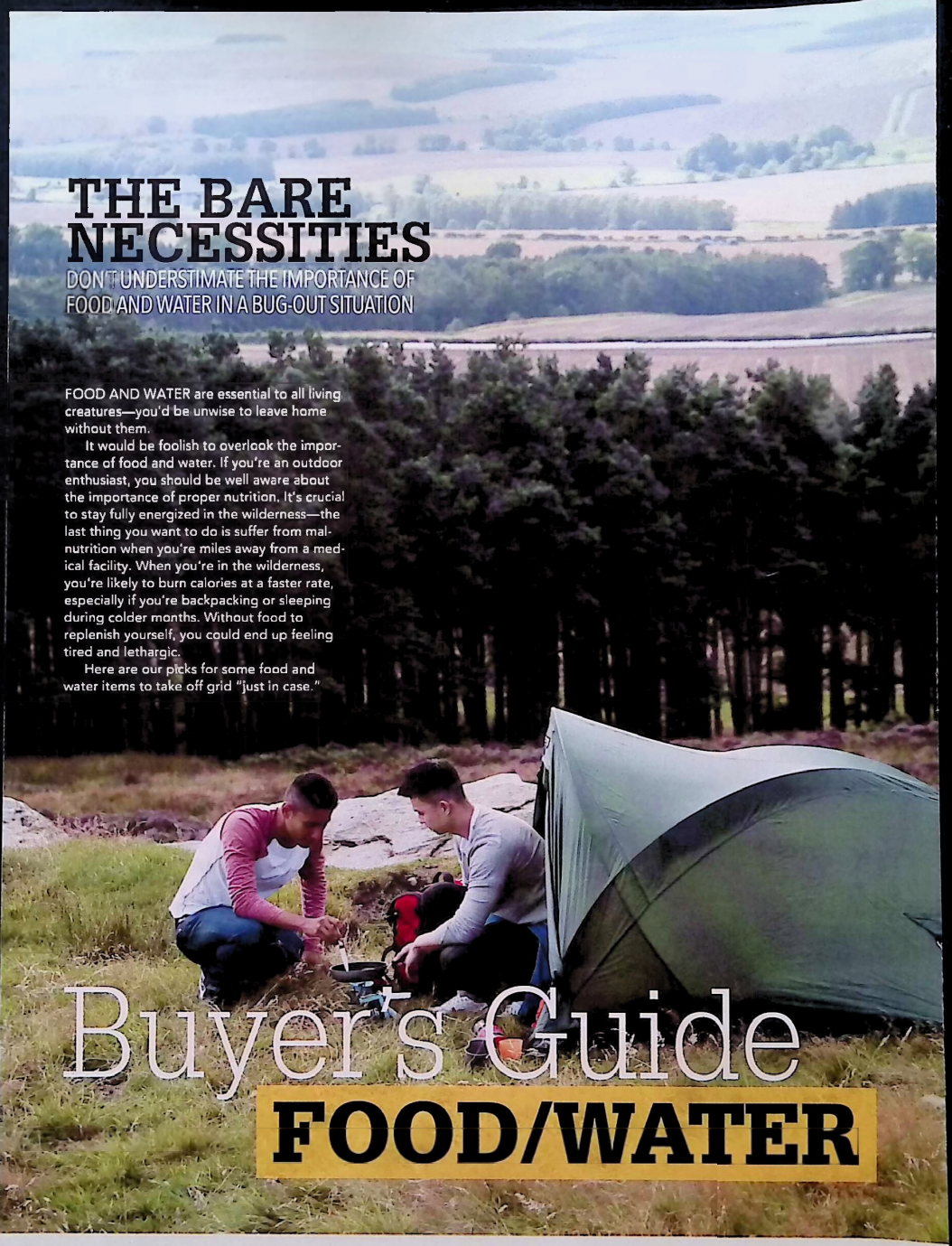
THE BARE NECESSITIES

DON'T UNDERSTIMATE THE IMPORTANCE OF FOOD AND WATER IN A BUG-OUT SITUATION

FOOD AND WATER are essential to all living creatures—you'd be unwise to leave home without them.

It would be foolish to overlook the importance of food and water. If you're an outdoor enthusiast, you should be well aware about the importance of proper nutrition. It's crucial to stay fully energized in the wilderness—the last thing you want to do is suffer from malnutrition when you're miles away from a medical facility. When you're in the wilderness, you're likely to burn calories at a faster rate, especially if you're backpacking or sleeping during colder months. Without food to replenish yourself, you could end up feeling tired and lethargic.

Here are our picks for some food and water items to take off grid "just in case."



Buyer's Guide

FOOD/WATER

1 STERIPEN

PRODUCT: STERIPEN ULTRA
WEBSITE: www.steripen.com
PRICE: $99.95

Specifications:
- Ultraviolet (UV-C) light rays safely sterilize clear water by destroying 99.99 percent of protozoa, bacteria and even viruses
- Purifies 16 ounces of water (cold or warm) in less than a minute
- Fits perfectly into store-bought bottles of water
- Includes SteriPEN Ultra water purifier, USB cable, carrying case and instruction manuals

Defining Features: In just 48 seconds using UV light, water is safe to drink. SteriPEN Ultra is proven to be safe and effective, eliminating more than 99.9 percent of bacteria, viruses and protozoa that cause water-borne illness. Featuring a user-friendly OLED (Organic Light Emitting Diodes) display, Ultra is rechargeable via a computer, outlet or portable solar panel. Ultra's UV lamp purifies 8,000 1-liter treatments.

Manufacturer's Comment: *"Ultra is the most advanced UV water purifier around. The OLED display clearly indicates treatment and battery status. With an internal rechargeable battery, there's no need to carry spare batteries."* –JULIE LORD, MARKETING DIRECTOR

1 STERIPEN $99.95

"ULTRA IS THE MOST ADVANCED UV WATER PURIFIER AROUND."

2 KELTY

PRODUCT: FOLDING COOLER
WEBSITE: www.kelty.com
PRICE: $55.95

Specifications:
- PVC-free
- Dual carry handles
- Waterproof cooler lining
- Reinforced bottom
- Molded top with four cup holders
- Small cooler comes with shoulder carrying strap
- Interior foam structure folds flat for easy storage

Defining Features: The Folding Cooler from Kelty gives a whole new meaning to the term "compact." Four insulating, folding foam panels Velcro into place, providing shape to the cooler, while a waterproof liner keeps melting ice from leaking out. Fully featured, this cooler comes with cup holders, carry handles and a reinforced bottom.

Manufacturer's comment: *"There when you need it, gone when you don't ... the Kelty Folding Cooler compresses down flat for easy storage and transport and pops open big to keep food and beverages icy cold."* –SCOTT KAIER, PUBLIC RELATIONS MANAGER

2 KELTY $55.95

"THE KELTY FOLDING COOLER COMPRESSES DOWN FLAT FOR EASY STORAGE AND TRANSPORT AND POPS OPEN BIG TO KEEP FOOD AND BEVERAGES ICY COLD."

3 GSI OUTDOORS

PRODUCT: PINNACLE CAMPER
WEBSITE: www.gsioutdoors.com
PRICE: $129.95

Specifications:
- A 2-liter pot with lid/fry pan and a 3-liter pot made of hard anodized aluminum
- Two crushproof, heat-resistant nylon strainer lids
- Complete four-person cook set
- Folding gripper to handle the pots and the lid/fry pan is included
- Included welded stuff sack doubles as a sink or wash basin

Defining Features: The Pinnacle Camper features durable pots, pans, dishes and cutlery made specifically for the campsite. Designed with Radiance coating, it's made to last. This camper set is made for up to four people and includes a 3-liter pot; 2-liter pot; two strainer lids; one 9.75-inch fry pan; four color-coded bowls and plates, insulated mugs and Sip-it tops; and a pot gripper, all packaged in a welded stuff sack made out of polyurethane-lined nylon fabric that doubles as a sink or wash basin.

Manufacturer's Comment: *"The Pinnacle Camper brings the conveniences of a homemade meal to the campsite."* –INGRID NIEHAUS, PUBLIC RELATIONS MANAGER

3 GSI OUTDOORS $129.95

"THE PINNACLE CAMPER BRINGS THE CONVENIENCES OF A HOMEMADE MEAL TO THE CAMPSITE."

"MOUNTAIN HOUSE HAS BEEN TRUSTED TO FEED TROOPS IN EVERY THEATER OF COMBAT SINCE THE 1960S."

4 MOUNTAIN HOUSE

PRODUCT: ESSENTIAL ASSORTMENT
WEBSITE: www.mountainhouse.com
MSRP: $79.99

Specifications:
- Dimensions: approx. 12.5 inches (H) x 10 inches (D) x 8 inches (W)
- Weight: 6.16 pounds
- Contains: Four Rice and Chicken, four Chili Mac with Beef, four Spaghetti with Meat Sauce

Defining Features: Just add water and voila–you have the convenience of home at the campsite! Don't settle for anything less than the best with Mountain House! These pouches include tasty meals in convenient pouches and a reusable bucket for storage. They come with a fantastic assortment of easy-to make meals, perfect for backpacking, camping or your emergency kit.

Reviewer's Comment: *"Mountain House, a part of Oregon Freeze Dry, pioneered freeze-dried food, creating a lighter-weight, better tasting meal. Mountain House has been trusted to feed troops in every theater of combat since the 1960s."* –KEVIN, GUEST BLOGGER

4 MOUNTAIN HOUSE **$79.99**

"THIS HEAVY DUTY CAMP GRILL IS IDEAL WHEN USING CAST-IRON COOKWARE."

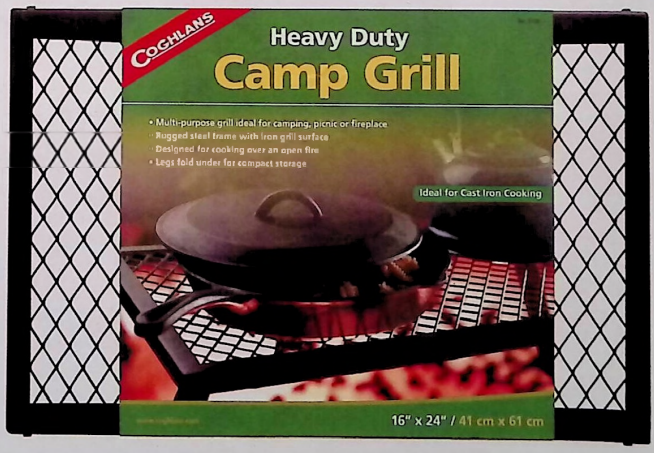
5 COGHLAN'S

PRODUCT: HEAVY DUTY CAMP GRILL
WEBSITE: www.coghlans.com
MSRP: $38.99

Specifications:
- Material: steel frame with iron mesh
- Designed for cooking over an open fire
- Size: 16 inches x 24 inches

Defining Features: The Heavy Duty Camp Grill from Coghlan's is a multipurpose grill perfect for camping, picnics or the fireplace. It's made of a rugged steel frame with an iron grill surface to cook your favorite campsite meals. Storage is a breeze–simply fold the grills under for compact storage.

Manufacturer's Comment: *"This Heavy Duty Camp Grill is ideal when using cast-iron cookware. The heavy-gauge metal frame and iron mesh grill surface is supported by sturdy legs that fold underneath when not in use."* –JUSTIN VANDENBERG, MARKETING AND PRODUCT MANAGER



5 COGHLAN'S **$38.99**

"AQUA LITERZ ARE PURIFIED, COMMERCIALLY STERILE DRINKING WATER BOXES, ASEPTICALLY PACKAGED, WITH EXCELLENT TASTE."

6 EMERGENCY ESSENTIALS
$35.95

7 SOLAR OVEN SOCIETY
$135

"THE SPORT SOLAR OVEN HAS INTRODUCED THOUSANDS OF PEOPLE TO THE JOY OF SOLAR COOKING ..."

6 EMERGENCY ESSENTIALS

PRODUCT: CASE OF AQUA LITERZ (12 PACK)
WEBSITE: www.beprepared.com (online seller)
MSRP: $35.95

Specifications:
- 33.8 ounces of water in each box
- Purified; no chlorine
- Best if used within five years

Defining Features: A case of Aqua Literz is a must-have item for your bug-out bag. This 12-pack provides water for two people for three days (72 hours). No emergency kit is complete without it. Whether you're trapped in the outdoors or during a power outage, it comes in handy.

Vendor's Comment: *"Aqua Literz are purified, commercially sterile drinking water boxes, aseptically packaged, with excellent taste. We recommend storing at least 2 liters of water per person per day for drinking."* –KELLY ANDERSON, PR MANAGER

7 SOLAR OVEN SOCIETY

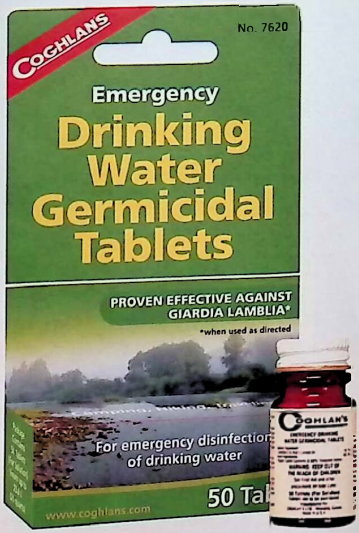
PRODUCT: SPORT SOLAR OVEN
WEBSITE: www.solarovens.org
MSRP: $135

Specifications:
- Large capacity
- Long lasting
- Weather resistant
- Complete kit: oven, pots, thermometer, manual, recipe booklet
- Lightweight
- Stable (normal winds cause no problems)
- Low cost

Defining Features: Are you looking for an environmentally friendly way to cook your favorite food on the campsite? The Sport Solar Oven works from the power of the sun. Weighing only 10 pounds, it's a lightweight, long-lasting grill that can withstand the toughest of weather, delivering delicious food each and every time.

Manufacturer's Comment: *"The Sport Solar Oven has introduced thousands of people to the joy of solar cooking because it is lightweight, long lasting and environmentally friendly."* –MARTHA PORT, MARKETING MANAGER

"EMERGENCY DRINKING WATER GERMICIDAL TABLETS ARE INTENDED FOR EMERGENCY DISINFECTION OF DRINKING WATER."



8 COGHLAN'S $9.49

8 COGHLAN'S

PRODUCT: EMERGENCY DRINKING WATER TABLETS
WEBSITE: www.coghlans.com
MSRP: $9.49

Specifications:
- Treats up to 25 quarts
- Proven effective against Giardia lamblia
- Easy to use; no unpleasant taste
- Iodine-based compound (no chlorine)

Defining Features: The Emergency Drinking Water Germicidal Tablets offer an inexpensive way to disinfect drinking water. There may be plenty of water around you, but drinking it without treating it first may cause you to become ill. Purify up to 25 quarts of water in an instant and start drinking clean water right away.

Manufacturer's Comment: *"Emergency Drinking Water Germicidal Tablets are intended for emergency disinfection of drinking water. When used as directed, they make most water bacteriologically suitable for drinking."*
–JUSTIN VANDENBERG, MARKETING AND PRODUCT MANAGER

9 GSI OUTDOORS

PRODUCT: H20 LITE 1 L
WEBSITE: www.gsioutdoors.com
MSRP: $7.95

Specifications:
- Lightweight
- Holds up to 1 liter
- Cool design
- Eco-friendly

Defining Features: Plastic water bottles are so passé! If you're looking for a funky way to hold your water, the H20 Lite may be what you're looking for. Don't let its small size fool you–it can hold up to 1 liter of water. It even comes with a no spill lid, so you don't lose your drink when you're on the go.

9 GSI OUTDOORS $7.95

"IF YOU'RE LOOKING FOR A FUNKY WAY TO HOLD YOUR WATER, THE H20 LITE MAY BE WHAT YOU'RE LOOKING FOR."

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PROTECTION

IN THIS SECTION TOP FIVE SURVIVAL WEAPONS + OFF-GRID FIREARM + GUN GUIDE

SURVIVAL OF THE SAFEST

Make Sure You Protect Your Loved Ones and Your Supplies

IF YOU'VE SPENT YEARS creating your off-grid property and making it the most efficient and practical structure you could have ever dreamed up, why would you leave it unprotected? It's an area many off-grid homesteaders often ponder—should you get weapons for your protection, and if so, which ones are the best for your lifestyle?

These are the questions that our experts answer on the next few pages so you don't have to spend your time asking friends for their weapon reviews. After all, that time could be better spent tending to your garden, installing insulation, fishing and canning your vegetables. Once you read our writers' opinions on how to protect your property, you can use that knowledge to formulate your family protection plan.

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SIMPLE SAFEKEEPING

PHOTO BY THINKSTOCK

FIVE ESSENTIAL WEAPONS FOR OFF-GRID LIFE

By LARRY SCHWARTZ

TWO IMPORTANT ASPECT of off-grid life involve hunting and protection.

As off-grid living typically takes you out into the wilderness, you just never know when a situation will arise that requires you to defend your homestead and your family or kill an animal to eat.

There's not one definitive method of hunting and protection for this type of lifestyle, so read on to discover the different types of weapons you can use and figure out which fits your needs—and your pocketbook—best.

FIRST ESSENTIAL

Whether it is a bolt-action hunting rifle, a smaller pump-action rimfire rifle or a semi-automatic rifle based on the AR (which stands for ArmaLite Rifle, the company that made the M-16) platform in a larger caliber, a rifle is designed to place a single projectile in a specific location and, normally, at relatively long distances.

Each type of rifle has unique strengths and weaknesses that make it a good option for some situations and not for others. Because of its simple but expandable design, a carbine-length rifle based on the AR platform gives you the best rifle for the widest range of users and situations.

Although it is also effective at close ranges, an AR-based carbine is your best option when you want a gun for hitting a specific point at distances longer than 50 yards.

The addition of Picatinny rails to the rifle allows you to add optical sights, flashlights, laser sights and other options, customizing your AR to your preferences and your situation.

Replacement stocks, which are adjustable for length, let you use one rifle for people of different sizes.

The buffer and spring in the stock, one of famed ArmaLite Design Engineer Eugene Stoner's greatest design accomplishments of the AR rifle, minimizes recoil, allowing anyone from an adult man to a young

"... UNDERSTAND WHEN IT IS THE RIGHT TIME OR SITUATION TO USE DEADLY FORCE AND WHEN A LESS-LETHAL OPTION MAY BE A BETTER CHOICE WHILE STILL MAINTAINING YOUR SAFETY AND PROPERTY."

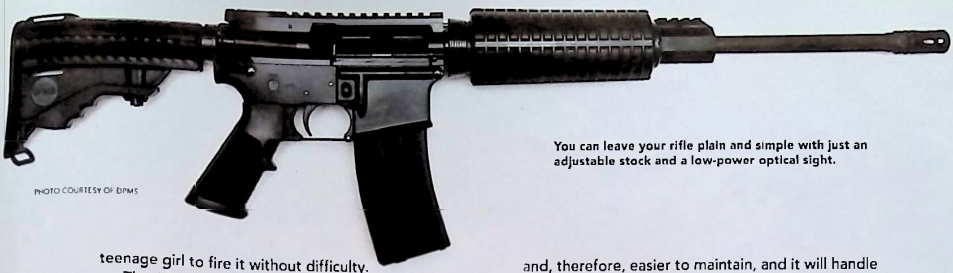


PHOTO COURTESY OF DPMS

You can leave your rifle plain and simple with just an adjustable stock and a low-power optical sight.

teenage girl to fire it without difficulty.

The AR design, in general, is a very easy-to-use rifle. Gail Trotter, a senior fellow at the Independent Women's Forum, recently testified before the Senate Judiciary Committee that "Young women are speaking out as to why AR-15 [style] weapons are their weapon of choice. The guns are accurate. They have good handling. They're light. They're easy for women to hold."

As the design is based on an upper barrel and sight assembly and a lower receiver and trigger assembly, you can customize different upper assemblies for different purposes, such as home defense or hunting.

SECOND ESSENTIAL

Like rifles, shotguns come in different types of actions: pump (you move the fore stock back and forth to load and extract a shot shell) and semi-automatic (you extract the shell and load without manual intervention). Each type of action has its strengths and weaknesses, so you need to think about how you will use the shotgun and what you need it to do before you pick the action that best fits your needs.

If you want a versatile shotgun, one that you can use for a variety of purposes, a pump action that will accept interchangeable barrels will give you the best bang for your buck.

As a pump action does not need the power of the shell's "exhaust" to cycle the action like a semi-auto action, you can use shells containing less powder for situations like firing inside the house when you want enough power to get good penetration but not so much that shot or slugs pass through interior walls.

Shotguns are easy to learn to shoot, and different gauges allow anyone, regardless of stature or strength, to use one. One thing to ignore is the idea that a shotgun will cover every inch of a wide area with one blast; at ranges inside of a house, the width of the shot pattern is not going to exceed more than a person's body width, so you can't just point and shoot and expect to stop an assailant with a shotgun.

The pump action is simple to use, less complicated and, therefore, easier to maintain, and it will handle a wider range of shells than a semi-automatic action.

Although accuracy is still important, the use of shot instead of a single bullet does improve your hit probability, especially when under stress.

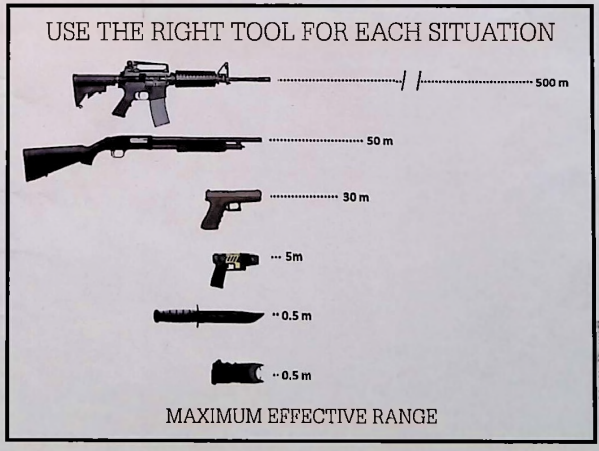
Interchangeable barrels will enable you to use the same shotgun in a variety of roles: home defense with a shorter barrel, hunting for birds and small game with a longer smoothbore barrel and hunting for big game with a longer, rifled barrel sporting a scope.

THIRD ESSENTIAL

Just as the shotgun is best used in the middle-range distances rather than those long ranges the rifle is best used for, the handgun is best used in the shorter-range distances that extend from your personal striking distance out to around 50 yards at most. While most people can pick up a rifle or shotgun and use it effectively, the handgun needs to be very much fitted to the individual using it.

Handguns come in different types of actions, the most common today being the revolver or the semi-automatic pistol. Both types of action will get the job done and are fairly easy to use. If you want something that simplifies everything from aiming to trigger pull to reloading, a semi-automatic pistol is probably the best choice.

The semi-auto pistol can hold more ammunition and is easier to load and reload.



"YOUNG WOMEN ARE SPEAKING OUT AS TO WHY AR-15 [STYLE] WEAPONS ARE THEIR WEAPON OF CHOICE."
–GAIL TROTTER, SENIOR FELLOW AT THE INDEPENDENT WOMEN'S FORUM

You can customize your rifle with a wide range of attachments to meet any situation you might face.

PHOTOS COURTESY OF BRIAN WALLACE

CHOOSE WISELY

Although the rifle can be used for all distances, from long-range to close-combat distances, it is best to select the right tool for the job at hand: the rifle with ball ammunition for long-range shots, the shotgun with the shot shell designed the current need or a handgun with hollow points and lower powder levels to provide adequate penetration without shooting through walls or other people.

CLEANING KITS

Knowing how to use your weapons includes knowing how to maintain them. We need to know how to clean and lubricate our guns, keep our edged weapons clean and sharp and maintain our less-than-lethal equipment.

Guns need to cleaned to remove spent powder and lubricated for optimal functioning. Shotguns need to be cleaned and oiled to keep them shooting well and prevent rusting. These are all accomplished with a basic cleaning kit you can find at any gun store, outdoor store or even farm supply stores.

Knives and other edged tools need to be oiled to prevent rusting and kept sharp. Simple machine oil works fine for this. A mill bastard file and a couple of whet stones in medium and fine grit are all you need, plus time spent practicing how to use them, to keep a good edge in place.

THE RIGHT AMMO

Combine the right kind of ammunition with your gun of choice for a given situation and you can handle whatever comes your way. Different types of bullets–from hollow point (which expand on contact) to ball ammunition (which will go straight through what it hits) to frangible rounds (which break into smaller pieces, causing great damage but losing energy faster)–coupled with slow- or fast-burning powders or different amounts of powder can customize what they do for the job at hand.

For home defense, you can equip your AR with frangible bullets and lighter powder charges that will still give you the penetration and expansion you need on an attacker in your home without over-penetrating or passing through a wall like ball ammunition.

For shotguns, you can user 00 buckshot for hunting, birdshot for small game and single 0 buckshot with a lighter power charge for home defense.

Pistols ammunition can be tailored for self-defense and home defense in the same manner that you can for your AR carbine.

The right bullet plus the right powder in the right caliber will give you the right round.

It can be equipped with a Picatinny rail, which is used for mounting accessories, such as a laser sight or flashlight.

With interchangeable grips, it can be sized to fit your hand and the hand of others in your family. Don't try to get one to fit all hands; get more than one to fit all hand sizes.

Also, like the shotgun and rifle, you can use different types of ammunition depending on your purpose, be it hunting, self-defense or target practice.

FOURTH ESSENTIAL

In addition to the lethal weapons noted above, you should also include at least one non-lethal option for those self- or property-defense situations. Remember that every bullet fired from a gun comes with a lawyer attached to it. The news is peppered with stories about people who defend themselves with a gun of some sort and wind up in court, sometimes criminal court and sometimes civil court, where they have to defend their use of deadly force. Non-lethal options are many and include:

•Tasers and bean-bag guns or crowd-control rounds in a shotgun, if they are legal to own and/or use where you live, when you still want to keep some distance between yourself and the bad guy but don't want to kill him or her.

•Stun guns, kubotans or batons/clubs for if the bad guy gets in close.

•Chemical sprays like Mace or pepper spray, but these are only good for using in well ventilated areas with no breeze, otherwise you may do yourself more harm than the bad guy.

FIFTH ESSENTIAL

Our final essential is very likely one of mankind's first tools: a sharp blade made of stone or bone. It is a very useful tool and a weapon for both defense and offense. If you carry a good knife with you on a daily basis, you know how useful it can be in many different situations.

When you select a knife, you want remember that it is both weapon and tool, so choose characteristics that will support both. My favorite style is that of the KA-BAR fighting knife. It has a long and strong blade with an edge on the bottom side and nothing on the top, a handle that is easy to grip and hold on to, a blade guard to keep your hand from slipping onto the blade when in use and a metal base to allow you to use it as a hammer for tent pegs or anything else you needed to hit or smash.

A blade without an edge along the top can be used for

splitting, or battoning, wood when you don't have a saw or axe handy. The unsharpened edge also allows you to rest your thumb on the top of the blade to give you better control of the cutting edge.

If you need it as a weapon, you will need something with a strong blade of at least 6 inches to give you enough penetration to reach an attacker's vital organs.

Both fixed-blade, or sheath, and folding-blade knives can meet your needs. If going with a folder, be sure to pick one with a strong and thick blade so that it can be used for light prying. It should also have a blade lock so you don't run the risk of closing it on your hand and losing a finger or two.

KNOW HOW TO USE THEM

The most important part of owning any weapon is knowing how to use it in a safe and effective manner. It's crucial that you know how to use your different weapons in the variety of scenarios you might face, with perfect operation and with malfunctions, in daylight or darkness, standing up or from odd angles.

Work on your marksmanship with a rifle, shotgun and pistol. Get instruction from a professional on how to use a knife or stun gun in close-combat situations and learn about their capabilities. Do the same with your firearms; learn and practice immediate-action drills for loading your guns when you are out of ammunition and practice how to clear a jam or other malfunction.

And finally, study, discuss and understand when it is the right time or situation to use deadly force and when a less lethal option may be a better choice while still maintaining your safety and property.

PHOTO BY THINKSTOCK

Proper care and maintenance are key to keeping your guns operating correctly.

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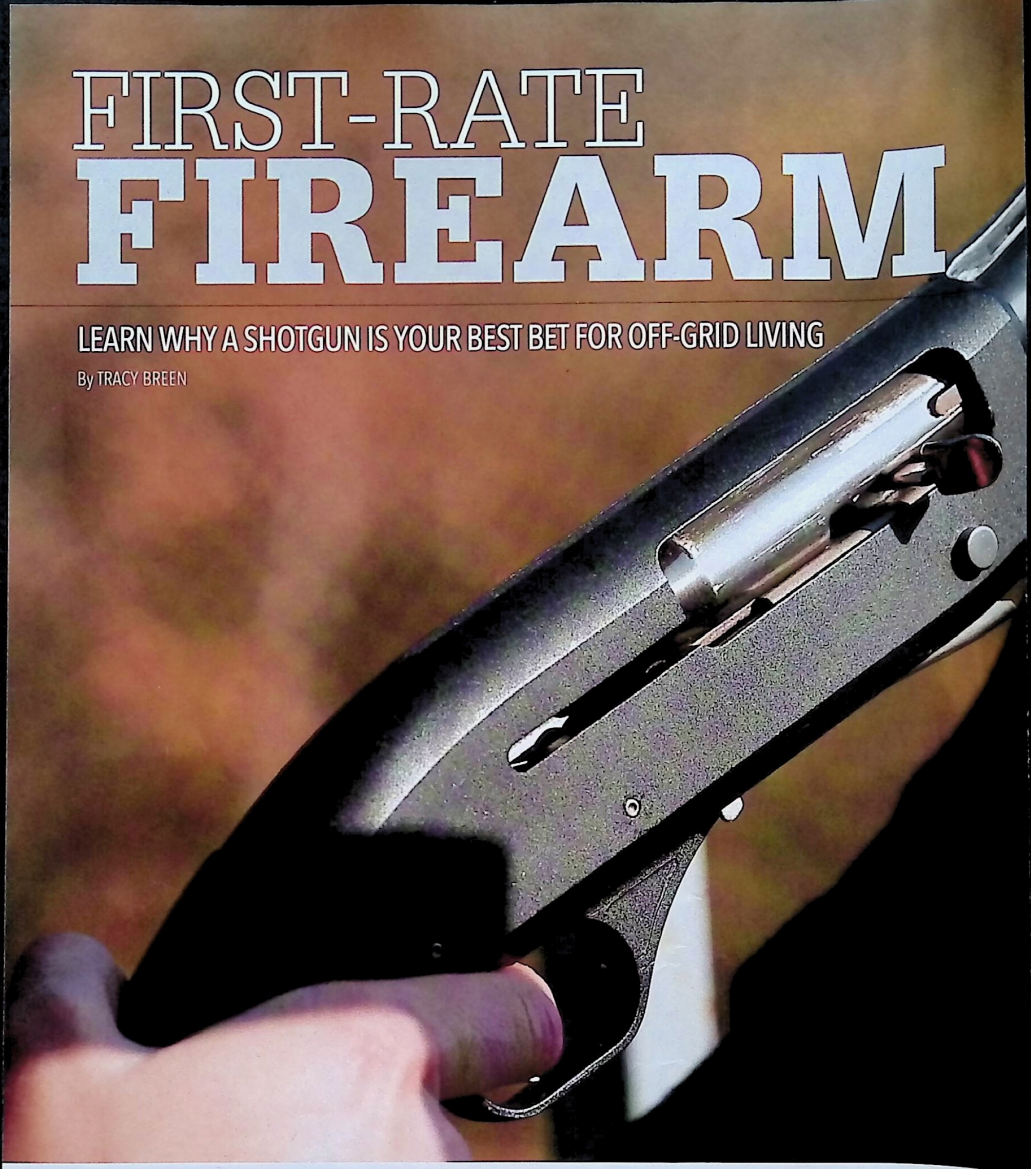
FIRST-RATE FIREARM

LEARN WHY A SHOTGUN IS YOUR BEST BET FOR OFF-GRID LIVING

By TRACY BREEN



THERE ARE FEW TOOLS that are as valuable on a farm or an off-the-grid homestead as a gun.

Almost every person I know who lives off the beaten path has at least a few different guns. Some people have a pile of guns, some for hunting and some for self-defense. As not everyone can afford to own multiple firearms, I am going to pick the perfect gun for those living in a remote location.

Regardless of what gun you think is best for off-grid purposes, a firearm is as valuable to a homesteader as a hammer and nails are to a carpenter.

PHOTO BY THINKSTOCK

WHICH ONE?

The question is: Which gun is best? I have my own opinion on this, but I decided to talk to a few people who really know guns and deal with home-defense situations all the time.

I talked to Andy McCormick from Legacy Sports International, a gun importer based out of Reno, Nev. According to McCormick, as far as home defense goes, nothing beats a shotgun.

"I hear many people talk about buying a pistol or a revolver for their wife to protect herself when the husband is away," McCormick says. "There is no question that a handgun can do the job, but nothing beats a shotgun."

I also spoke with Jack Coad, resident New Yorker and retired U.S. Marshall who used to protect people for a living and also taught people how to protect themselves.

"I always told everyone that a shotgun was the best home defense gun available," he says.

The main reason a shotgun is such a great weapon is because a shotgun load can spray an entire area. If you use a shotgun, you don't need perfect aim; you can pretty much point the gun in the direction you want to shoot and pull the trigger. Of course, it's important to get proper training, so make sure you do. It will serve you well when you need to use the gun.

WHICH MODEL?

The next question you must ask yourself is which shotgun is best for you. There is no question that the 12 gauge is the best all-around shotgun to have. If you shoot buckshot, you will probably be throwing eight or more large-diameter

"... A FIREARM IS AS VALUABLE TO A HOMESTEADER AS A HAMMER AND NAILS ARE TO A CARPENTER."

PHOTO BY THINKSTOCK

TYPES OF AMMO

- Target loads/birdshot
- Heavy birdshot
- Small pellet buck
- Large-pellet buck
- Slugs

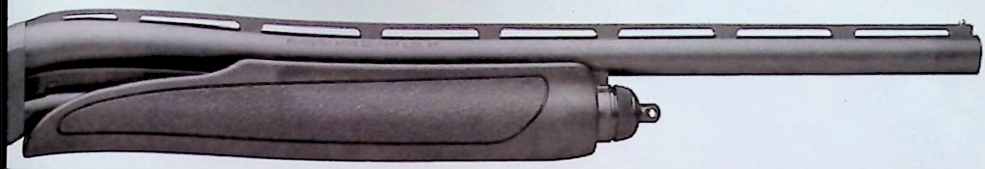
"THERE IS NO QUESTION THAT A HANDGUN CAN DO THE JOB, BUT NOTHING BEATS A SHOTGUN."

BBs toward the intruder. These large BBs will quickly cut through anything in their path. A 3-inch magnum 12 gauge is one of the most popular guns on the market. For most men, a 12 gauge is the best option, but for smaller women, a 20 gauge has a smaller shell and not as much recoil.

"It's important that a woman have a gun that she is not afraid of and that fits her well," Coad says. "If a person is intimidated by a weapon, chances are he or she will never use it."

HUNTING

A shotgun makes a great hunting weapon, too, which enables it to serve a dual purpose off grid. You can take down a grizzly bear one day and then switch out the barrel for bird hunting or home defense on another.



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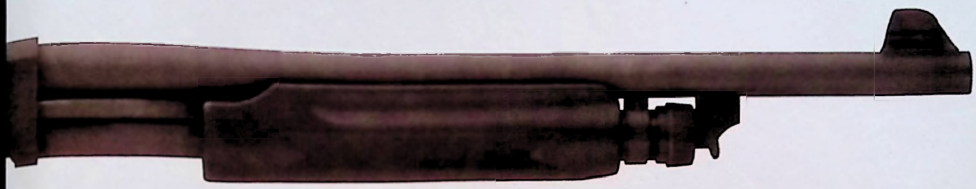


PHOTO COURTESY OF SAVAGE ARMS

20 VS. 12

The 20 gauge delivers far less recoil than the 12 gauge, as in 30 to 50 percent less! Recoil is important: Too much can make the shooter miss his or her target.

The 12 gauge offers many more choices of shotshells, available in a variety of lengths, loads and shot sizes.

"IF A PERSON IS INTIMIDATED BY A WEAPON, CHANCES ARE HE OR SHE WILL NEVER USE IT."

GOOD FIT

When you choose a shotgun, make sure you purchase one that fits you. If a gun is too long, too heavy or too hard to handle, it won't do you any good. Women and children sometimes have a hard time finding a shotgun that fits them perfectly. I recently purchased a Legacy Escort youth shotgun for my wife and son to use. It is a semi-automatic that's perfect for both of them. It's lightweight, easy to handle and will take down anything.

AMMO

Note: One size does not fit all for shotgun ammo. There are many different kinds of brands and loads on the market; some are designed specifically for defense, some for upland hunting and others for coyote and deer hunting. Buy a few boxes of each so you'll have versatility at your fingertips.

BEST OF BOTH WORLDS

Some people prefer a handgun for defense and a shotgun for hunting. That said, if you get the right shotgun and use the correct ammo, you'll need only one gun because nothing beats the versatility, accuracy and knockdown power of a shotgun when it's in the right hands.

THE RUNNER UP

Many believe the second best gun to have around is a .22 revolver. A .22 is a small-caliber load, but it can do a lot. The ammo is inexpensive and, in a pinch, a .22 revolver can bring down a variety of game animals. A .22 revolver is also fairly lightweight, and just about anyone can learn to shoot one quickly.

SHOTSHELL PAYLOAD

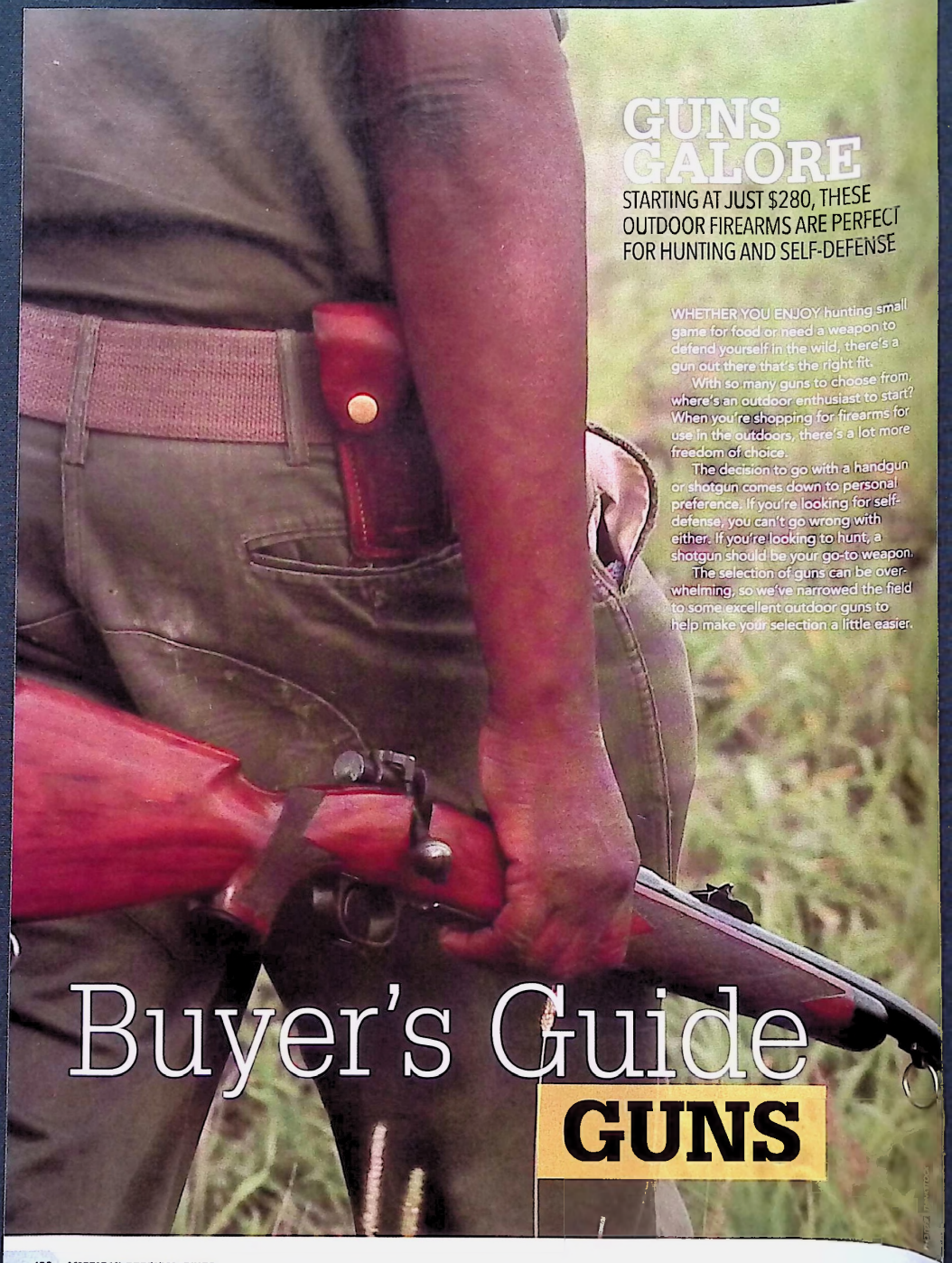
Generally speaking, shotshells feature a payload of between ¾ and 1 ½ ounces, the smaller the shot size, the more numerous the pellets in a given load.

GAUGE IT

The smaller the gauge, the larger the bore. The larger the bore, the more powerful the rounds.

ACTION!

Shotguns are available in three different types of action: pump, double-barreled and semi-automatic.



GUNS GALORE

STARTING AT JUST $280, THESE OUTDOOR FIREARMS ARE PERFECT FOR HUNTING AND SELF-DEFENSE

WHETHER YOU ENJOY hunting small game for food or need a weapon to defend yourself in the wild, there's a gun out there that's the right fit.

With so many guns to choose from, where's an outdoor enthusiast to start? When you're shopping for firearms for use in the outdoors, there's a lot more freedom of choice.

The decision to go with a handgun or shotgun comes down to personal preference. If you're looking for self-defense, you can't go wrong with either. If you're looking to hunt, a shotgun should be your go-to weapon.

The selection of guns can be overwhelming, so we've narrowed the field to some excellent outdoor guns to help make your selection a little easier.

Buyer's Guide

GUNS

1 BENELLI

PRODUCT: SUPER BLACK EAGLE II SHOTGUN
WEBSITE: www.benelliusa.com
MSRP: $1,569

Specifications:
- **Available Calibers:** 12-gauge 2 ¾ inch, 3 inch and 3 ½ inch
- **Barrel Lengths:** 26 inches, 28 inches
- **Overall Length:** 47.6 inches, 49.6 inches
- **Weight Empty:** 7.2 pounds, 7.3 pounds
- **Capacity:** 4+1 rounds

Defining Features: The Super Black Eagle II shotgun is the original 3 ½-inch semi-automatic shotgun. It's the gold standard for semi-auto styling, versatility and performance. It includes Benelli's patented ultra-reliable Inertia Driven system and ComforTech recoil reduction system for easy shooting.

Manufacturer's Comments: *"The Super Black Eagle II shotgun is the latest and greatest firearm from Benelli. It's the perfect firearm to take with you on your next hunting trip."* –JOE COOGAN, MEDIA RELATIONS AND COMMUNICATIONS MANAGER

1 BENELLI $1,569

"IT'S THE PERFECT FIREARM TO TAKE WITH YOU ON YOUR NEXT HUNTING TRIP."

2 TRISTAR SPORTING ARMS

PRODUCT: RAPTOR A-TAC DIGITAL CAMO
WEBSITE: www.tristararms.com
PRICE: $519

Specifications:
- **Available Calibers:** 12 gauge
- **Barrel Length:** 20 inches
- **Weight Empty:** 7 pounds
- **Chamber:** 3 inches
- **Finish:** Digital Camo

Defining Features: Are you looking for a firearm you won't have to break the bank to afford? The TriStar Raptor A-TAC is right up your alley. This hunting shotgun is made with function and affordability in mind. This 3-inch, gas-operated, semi-automatic shotgun boasts a bridge-front sight with fiber-optic bead, Picatinny rail mounted on top of the receiver with a ghost ring sight installed, fixed pistol-grip stock, swivel studs and a tactical-style operating handle.

Manufacturer's Comments: *"The Raptor A-TAC in Digital Camo features a highly durable injection molded stock with a fixed pistol grip, a Picatinny rail, ghost ring sight and fiber optic bridge front sight. It is gas operated and has a 20-inch barrel with a removable choke system that is fitted with Beretta Mobile threads and includes one extended muzzle-break cycle choke tube. All of this combined makes this an excellent choice for any survival situation."* –TIM ZICK, PR SPECIALIST

2 TRISTAR SPORTING ARMS $519

"THE RAPTOR A-TAC IN DIGITAL CAMO FEATURES A HIGHLY DURABLE INJECTION-MOLDED STOCK WITH A FIXED PISTOL GRIP, A PICATINNY RAIL, GHOST RING SIGHT AND FIBER-OPTIC BRIDGE FRONT SIGHT."

3 MAGNUM RESEARCH

PRODUCT: DESERT EAGLE 1911 U MODEL
WEBSITE: www.magnumresearch.com
PRICE: $946

Specifications:
- **Available Calibers:** .45 ACP
- **Barrel Length:** 5 inches
- **Overall Length:** 6.85 inches
- **Weight Empty:** 25.8 ounces
- **Capacity:** 6+1 rounds

Defining Features: Desert Eagle 1911 U is a dual-purpose handgun perfect for defending yourself in the outdoors or at home. This ultra-compact weapon is the perfect firearm for those looking for a smaller, easily concealable weapon. It is built on an ultra-light-weight frame made of aircraft-grade aluminum alloy and features a 4140 high-carbon steel slide and a rear sight adjustable for windage and elevation.

Reviewer's Comments: *"The USA-based Magnum Research, Inc., (MRI) newest 1911 offering addresses the high consumer demand for a smaller, ultra-compact, ultra-light concealed carry firearm in a .45 ACP caliber. Introducing Magnum Research's DE1911U, Undercover model."* –SHERYL GALLUP, GALLUP MEDIA MARKETING

"INTRODUCING MAGNUM RESEARCH'S DE1911U, UNDERCOVER MODEL."

3 MAGNUM RESEARCH **$946**

4 E.M.F. COMPANY INC.

PRODUCT: AT-380 II
WEBSITE: www.emf-company.com
PRICE: $280

Specifications:
- **Available Calibers:** .380 ACP
- **Barrel Length:** 2 ¾ inches
- **Overall Length:** 5.65 inches
- **Weight Empty:** 20 ounces
- **Capacity:** 6 rounds

Defining Features: The Accu-Tek AT-380 II is made to last. It is constructed from high-strength, corrosion-resistant 17-4 stainless steel. Its exposed hammer and comfortable grip makes it easy to hold. The exposed hammer and comfortable grip simplify single-handed operation.

Manufacturer's Comments: *"The Accu-Tek AT-380 II is a compact single-action semi-auto .380 ACP caliber pistol. The magazine release is of European type, located on the bottom of the grip. The AT-380 II is very accurate and dependable."* –DEBBIE SIMS, DIRECTOR OF OPERATIONS

"THE AT-380 II IS VERY ACCURATE AND DEPENDABLE."

4 E.M.F. COMPANY **$280**

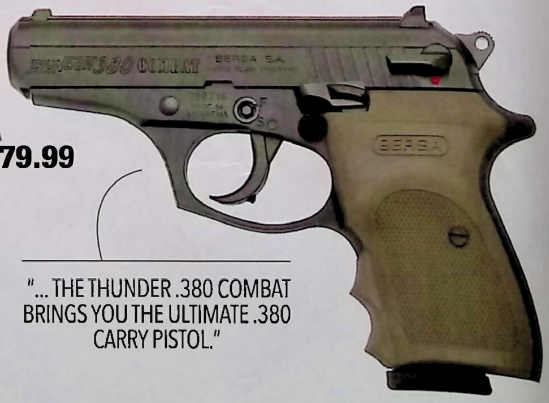
5 BERSA

PRODUCT: THUNDER .380 COMBAT
WEBSITE: www.bersa.com
PRICE: $379.99

Specifications:
- **Available Calibers:** .380 ACP
- **Barrel Length:** 3.5 inches
- **Overall Length:** 6.5 inches
- **Weight Empty:** 20 ounces
- **Capacity:** 8+1 rounds

Defining Features: Don't let the name fool you–the Bersa Thunder .380 Combat is a lower profile, inconspicuous handgun. It's a redesign of the popular Bersa classic design. In this handgun, Bersa combines the reliability of previous models with better performance and a new look.

Manufacturer's Comments: *"A modern take on a Bersa classic design, the Thunder .380 Combat brings a new look to the Bersa lineup. Combining outstanding features from existing models along with new ideas, The Thunder .380 Combat brings you the ultimate .380 carry pistol."* –RAFAEL DEL VALLE, EAGLE IMPORTS, NATIONAL SALES MANAGER



5 BERSA **$379.99**

"... THE THUNDER .380 COMBAT BRINGS YOU THE ULTIMATE .380 CARRY PISTOL."

6 METRO ARMS
$500

"... YOUR AMERICAN CLASSIC COMMANDER MODEL IS YOUR GO-TO WEAPON."

6 METRO ARMS

PRODUCT: AMERICAN CLASSIC COMMANDER MODEL
WEBSITE: www.metroarms.com
PRICE: $500

Specifications:
- **Available Calibers:** .45 ACP, 9mm
- **Barrel Length:** 4.25 inches
- **Overall Length:** 7.5 inches
- **Weight Empty:** 35.2 ounces
- **Capacity:** 8 rounds

Defining Features: The Metro Arms American Classic Commander Model is a redesign of the company's American Classic II. It's a single-action firearm with a durable frame made of 4140 steel and a slide made of 4140 hammer-forged steel. It features a Novak-style rear sight, making it easier to acquire your target regardless of your skill level.

Manufacturer's Comments: *"If you're looking for a stylish way to defend yourself in the wild, your American Classic Commander Model is your go-to weapon."*
–DAVE JOHNSON, PRODUCT MANAGER

7 ROCK RIVER ARMS
$1,255

"THE ROCK RIVER ARMS VARMINT A4 OFFERS THE UTMOST IN VERSATILITY."

7 ROCK RIVER ARMS, INC.

PRODUCT: 24-INCH VARMINT A4
WEBSITE: www.rockriverarms.com
PRICE: $1,255

Specifications:
- **Available Calibers:** .223 Wylde Chamber for 5.56 and .223 cal.
- **Overall Length:** 24 inches
- **Weight Empty:** 10.2 pounds
- **Capacity:** 10 rounds

Defining Features: The Rock River Arms Varmint A4 offers the utmost in versatility. It includes the new TRO (Top Rail Octagonal) free-float hand guard, which increases flexibility with its full-length rail. The hand guard serves a dual purpose–it provides a grip and ventilation so your handgun will be at its best and never overheat.

Manufacturer's Comments: *"Rock River Arms, Inc., an industry leader well known for producing a full line of high-quality AR-15-style rifles, components, parts and accessories, upgrades their Varmint Series Rifles with their new RRA TRO hand guard, representing further growth in RRA's expanding line of high-performance hunting, precision shooting and competitive firearms."–KIM CAHALAN, MEDIA RELATIONS*

"THE CONTOURED AMBIDEXTROUS THUMB RESTS MEAN YOU'LL HAVE NO PROBLEM WHETHER YOU'RE RIGHT HANDED OR A SOUTHPAW."

8 TAURUS $434.59

9 REMINGTON $1,649

"INAUGURATING THIS EXCLUSIVE NEW LINE ARE, RESPECTIVELY, THE MOST POPULAR AUTO-LOADING SHOTGUN AND THE MOST POPULAR PUMP-ACTION SHOTGUN OF ALL TIME."

8 TAURUS

PRODUCT: MILLENNIUM G2 .40 CAL POLYMER GRIP SUB COMPACT
WEBSITE: www.taurususa.com
PRICE: $434.59

Specifications:
- **Available Calibers:** .40 S&W
- **Barrel Length:** 3.2 inches
- **Overall Length:** 6.24 inches
- **Capacity:** 10+1 rounds

Defining Features: The Millennium G2 .40 Sub Compact offers an easy-to-grip grit texture that covers all points of contact on your hand. The contoured ambidextrous thumb rests mean you'll have no problem whether you're right handed or a southpaw. The magazine release is located close by for easy mag changes in the heat of the moment.

Manufacturer's Comments: *"With vast majority of states approved for concealed carry, Taurus engineers continue to design firearms specific for this growing market. With close inspection of the new Millennium G2, you will find differences from this gun to that of the Millennium Pro."* -KIM CAHALAN, MEDIA RELATIONS

9 REMINGTON

PRODUCT: MODEL 1100 AMERICAN CLASSIC
WEBSITE: www.remington.com
PRICE: $1,649

Specifications:
- **Available Calibers:** 12 gauge
- **Barrel Length:** 28 inches
- **Overall Length:** 48.5 inches
- **Weight Empty:** 8 pounds

Defining Features: The Remington Model 1110 American Classic can be best described as a handsomely crafted firearm made of walnut stock. It comes with a beautifully crafted, machine-cut engraved receiver with gold fill. This is the perfect firearm to use at grand sporting events or for hunting in the wilderness.

Manufacturer's Comments: *"For 2014, we're proud to present the Remington American Classics Collection, honoring the most enduring legacy in American firearms. Inaugurating this exclusive new line are, respectively, the most popular auto-loading shotgun and the most popular pump-action shotgun of all time."* -JESSICA KALLAM, PUBLIC RELATIONS MANAGER

AMERICAN SURVIVAL GUIDE

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PHOTO COURTESY OF TIM RALSTON

PREPPING WITH RALSTON

BY TIM RALSTON

Timothy Bryan Ralston is an American inventor, veteran, adventurer, author and movie consultant for his expertise in the field of survival and preparedness education. He is best known for his appearance in the powerful motivational film "The Compass" and for being the international spokesperson in the launch of NatGeo's No. 1-rated program "Doomsday Preppers."

GOING GRAY

BLEND IN TO PROTECT YOURSELF IN A CASTASTROPHE

THERE ARE MANY DIFFERENT TYPES OF SURVIVALISTS out there, each individually preparing for a wide variety of reasons.

One extremely calculated form of a survivalist is the Gray Man. This philosophy envelops the idea of being able to blend into a crowd, remaining unnoticed and unidentifiable physically and of actual intent, in order to protect oneself and one's possessions. A Gray Man adjusts every aspect of his life to coincide with these guidelines. The Gray Man lives to survive.

As a survivalist myself, I have the utmost respect for the Gray Man lifestyle and believe it is an excellent form of preparedness, especially if one anticipates a time of mass chaos. Yet, being a public figure as well, I obviously don't live my everyday life as a Gray Man. However, that doesn't mean I don't have the ability to go Gray if SHTF.

If a major catastrophe were to occur, I predict that, in no time, people would become morally corrupt as they fought for survival. Children would steal and neighbors would kill for the chance to stay alive. A world WROL would be unimaginably horrific to say the least. In these occurrences I am prepared to adopt the principals of the Gray Man.

> "IF A MAJOR CATASTROPHE WERE TO OCCUR, I PREDICT THAT, IN NO TIME, PEOPLE WOULD BECOME MORALLY CORRUPT AS THEY FOUGHT FOR SURVIVAL."

PHOTO BY THINKSTOCK

BLEND

The main goal of going Gray during times of SHTF is to not become the target of others.

Tactical clothing and gear are great for the wilderness but not for when trying to go unseen. Like a predator spying its prey, camouflage print will have you picked off from the crowd. You will be viewed as someone that is probably carrying desired survival tools, a fact that will increase the chances of you being killed.

On the other hand, you also don't want to dress so unaware that you have the appearance of being a weak target. The challenge is to find the balance between the two. In actuality, ou need clothing that is tough, durable and concealing yet doesn't scream out that you are an expert in survival. Choose muted colors of clothing that contain no symbols or logos. The Gray Man looks average, undesirable and unmemorable; he is a ghost among us.

HIDE

When creating a bug-out plan, I do not recommend sharing it with others. No person beyond your family should know where you are going. Second, I do not advise that your shelter reflect the supplies you have inside. Just like the attire of the Gray Man, your refuge should carry a similar appearance. You want it to be greatly protected without making it obvious that you are a golden ticket. Blend by being unfavorable on the outside while being strong and prepared within.

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"ONE EXTREMELY CALCULATED FORM OF A SURVIVALIST IS THE GRAY MAN."

CONCEAL

Like a true Gray Man, I am an advocate for concealable weapons. It's imperative to be able to defend yourself and your family without showcasing that you are prepared for a battle. Especially if SHTF, you would not want to be sought after for your weapon nor would you want to be challenged into using it. The best way to avoid these situations is to possess weapons of great power that can be concealed either on your body or in a backpack.

This is one of the reasons that I invented the X Caliber Survival Shotgun, produced by Chiappa Firearms. Not only does it have the ability to shoot multiple calibers, but it also folds down for easy concealment. A shotgun of this magnitude and versatility would not be expected to be found in a backpack.

GETAWAY

Just like the everyday world, a vehicle's desirability can determine its vulnerability. While some people like to drive flashy cars, thieves also like to steal them. Your vehicle during a get-out situation should be chosen to avoid this. A Gray Man drives an older model automobile lacking any bells and whistles that could draw attention to it. They do not advertise their political, global or even sports preferences on their bumpers, as this gives away too much personal information.

The perk of a Gray Man's vehicle is that it is kept in tip-top shape. Although it may appear to have wear and tear, it is, in fact, well cared for within. It is strong, prepared but, most importantly, dependable. Just as in all other aspects of being Gray, you don't want to show the public your aces in hand.

STAY ALIVE

Leading a Gray Man's lifestyle takes dedication and commitment to fulfill all of the principals for which it stands. The Gray Man knows how to stay alive, for the Gray Man is invincible. Whether you have the willpower to fully go Gray, having an understanding of this philosophy will give you a better chance of surviving when the SHTF.

"THE MAIN GOAL OF GOING GRAY DURING TIMES OF SHTF IS TO NOT BECOME THE TARGET OF OTHERS."

GRAY CHECKLIST

SUPPLIES

- Wear tough clothing, but nothing that stands out too much.
- Do not tell anyone about your bug-out plan.
- Keep your weapon concealed.
- Choose a vehicle that runs well but isn't flashy.

TWO IS BETTER THAN ONE

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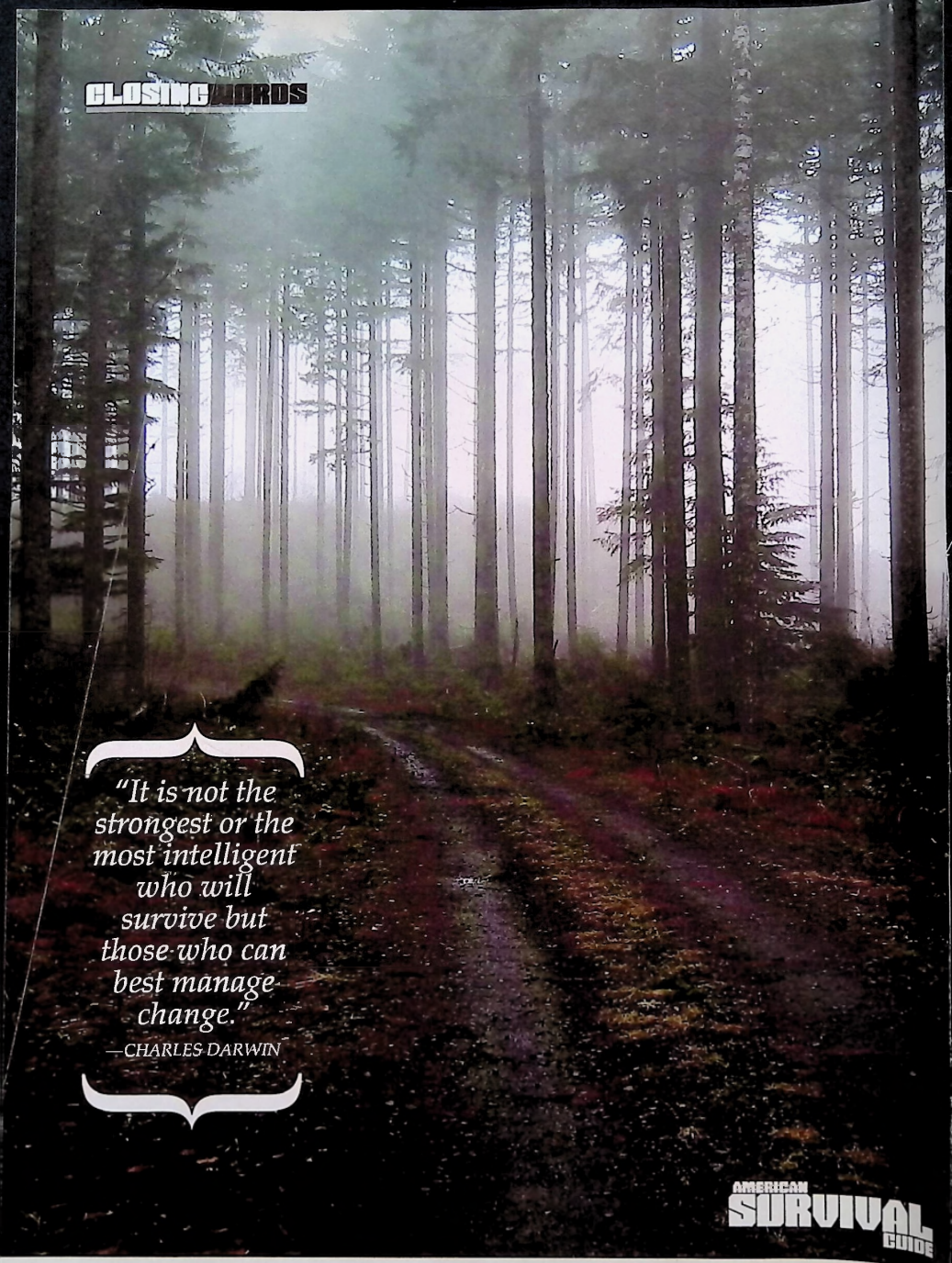

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